DDP 92/184
Digital Document Publisher

Finisher Maintenance Manual

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DDP92/184

Finisher
Maintenance Manual

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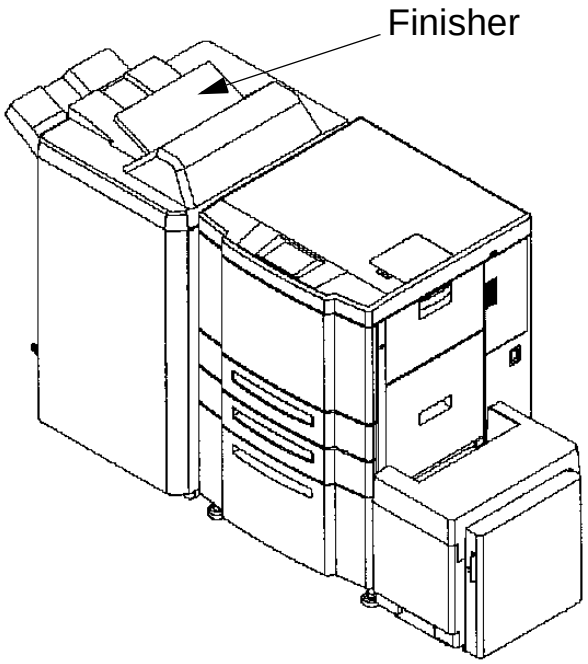

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DDP92/184 Finisher
Maintenance Manual

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Chapter 1. Outlines

1.1. Characteristics

92 pages/minutes high speed cut sheet finisher
Offset sorting and stapling with 3 places are available
Small size and easy paper handling
Easy change for staple cartridge
Applicable for variety size of paper
Stapling-and-folding, and folding are available. (Option)
A cover sheet and insertion pages from the cover sheet feeder are available. (Option)

1.2. Specifications

Finishing speed	92 pages /minute (Letter, A4/LEF)
Dimensions	781 x 1151 x 656 mm: Include the main tray
Weight	55 kg : Not include the cover sheet feeder 80 kg (Booklet model): Not include the cover sheet feeder 7 kg (cover sheet feeder)

Paper

1. Non-staple mode / Offset mode / Sub-tray exit mode
   A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5 LEF, A5 SEF, 12 x 18 SEF, 11 x 17 SEF, 8.5 x 14 SEF, 8.5 x 13 SEF, 8.5 x 12.4 SEF, 8.5 x 11 LEF, 8.5 x 11 SEF
2. Staple mode
   A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5 LEF, 12x18 SEF,11 x 17 SEF, 8.5 x 14 SEF, 8.5 x 13 SEF, 8.5 x 12.4 SEF, 8.5 x 11 LEF, 8.5 x 11 SEF
3. Center stapling/folding mode (Option)
   A3 SEF, B4 SEF, A4 SEF, 11 x 17 SEF, 8.5 x 14 SEF, 8.5 x 11 SEF
4. Cover sheet feeder (Option)
   A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5 LEF, 11 x 17 SEF, 8.5 x 14 SEF, 8.5 x 11 LEF, 8.5 x 11 SEF

Weight 16 to 110 (Index) lbs.

Stacking capacity

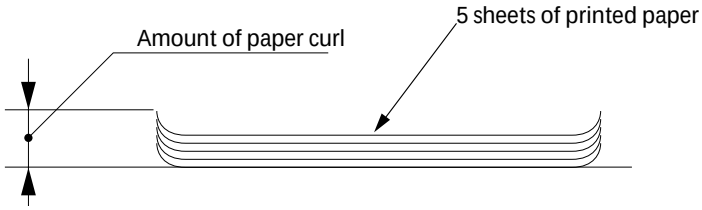
Each stacking capacity is specified for normal operating environment with xerography 75g/m^2 paper.

1. Sub-tray exit mode * Limited to the same size
   200 sheets equivalent
2. Non-staple / Offset mode * Limited to the same size
   Maximum 2,500 sheets---- A4, B5, 8.5 x 11
   Maximum 1,500 sheets---- B4, A3, 8.5 x 14, 8.5 x 13, 8.5 x 12.4, 11 x 17, 12 x 18
   Maximum 500 sheets---- A5 SEF
3. Staple mode---- Maximum 1,000 sheets

Number of stapled sheets	Other than A3 SEF, 11 x 17,12x18 , A5	A3 SEF, 11 x 17, 12x18 , A5
2 to 9	100 stacks	50 stacks
10 to 20	50 stacks	50 stacks
21 to 30	30 stacks	30 stacks
31 to 40	25 stacks	25 stacks
41 to 50	20 stacks	20 stacks

Table 1-1. Stacking Mode and Capacity

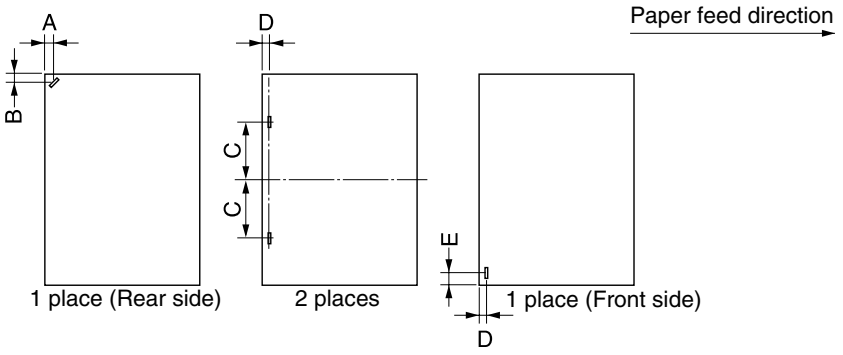
4. Center stapling/folding mode (Option)
   Booklets can be stacked until the sensor detects the stacker tray full in the booklet mode. The referential stacking capacities are shown below.
   Center stapling mode---- 5-sheet-folded booklet of ledger size paper x 20 set
   Center folding mode----- 3-sheet-folded booklet of ledger size paper x 33 set
5. Cover sheet feeder (Option)
   200 sheets equivalent (34 lbs. paper), within 40mm in height
   The allowable amount of paper curl with the following way is 10mm maximum

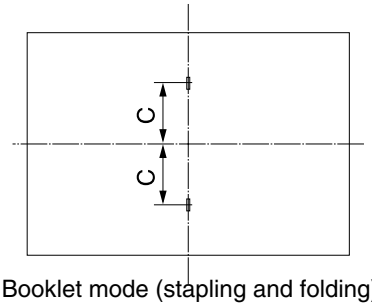


Amount of offset 30 mm Note: Non-staple mode only

Stapling capability Maximum 50 sheets (75 g/m^2, 5.0 mm and below)

Stapling position A = 8.5 mm C = 82.5 mm E = 14 mm B = 8.5 mm D = 8.5 mm





Booklet mode (stapling and folding)

Stapling capacity5,000 staples / cartridge

Power source 24V/5V (Supplied from the printer)

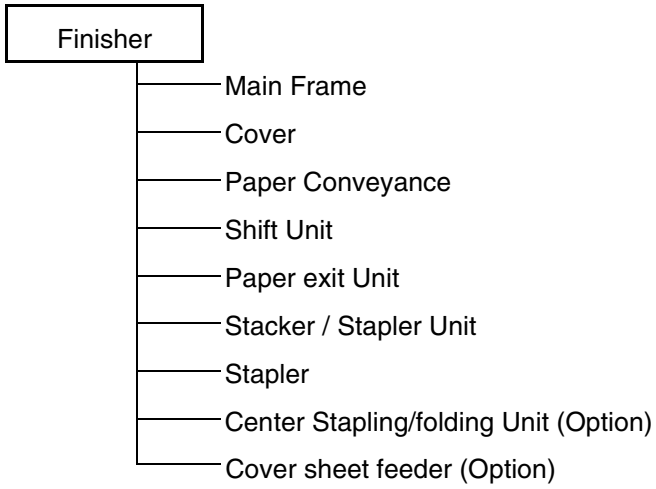
Temperature and Humidity

(1) Operation
Temperature : 10 to 32 °C (50 to 89.6 °F)
Humidity : 20 to 80 %
Wet Bulb 26 deg.C (78.8 °F) max.

(2) Recommended condition
Temperature : 19 to 25 °C (66.2 to 77 °F)
Humidity : 40 to 60 %

1.3. Configurations

The basic configuration of this finisher is as follows.



Chapter 2. Safe Handling of the Finisher

This chapter describes the rules for safe handling of the finisher which must be strictly observed by all maintenance personnel. Before conducting maintenance and inspection of the finisher, you must fully comprehend the following.

1. Before conducting maintenance or inspection, be sure to switch the power supply **OFF**.
2. If it is absolutely necessary to work with the power turned ON, observe the following:
3. Have one individual watch while the work is being performed so that that person may switch **OFF** the power switch at anytime if necessary.
4. Never allow two individuals to work at the same time. It is very dangerous if a drive part actuates suddenly.
   (a) Never wear a ring, wristwatch, cuff-links, bracelet, metal fastener or any other metallic objects.
   (b) Be sure not to loosen or misuse screws. It is good practice to put a sheet of paper under a portion where it is difficult to find small parts if dropped. Make it a rule to replace screws back to their original place immediately after removal of a part.
   (c) Be particularly careful not to let a tool or a part drop into the finisher.
5. Whenever working on near a rotating part, stop the rotation and ascertain the shape of it. The projection of a rotating part is very dangerous as it cannot be seen when rotating. During work, pay attention to ties, sleeves, shirts and long hair so that they may not be caught in the finisher. Always wear a working cap.
6. Before handling a movable part, make certain that it has completely stopped.
7. Wear eye protection whenever the following jobs are to be performed;
   (a) To hammer the pins or rivet.
   (b) To perform work using a hand drill.
   (c) To mount or dismount a spring.
   (d) To perform soldering or cutting wires.
   (e) To clean parts.
8. Make sure that the power is **OFF** when replacing a PCB.
9. Care must be taken to store covers which are detached at a proper place to avoid other people from tripping or stumbling, over them.
10. Do not leave tools in any unit, nor leave them on the floor. It is dangerous if they are dropped into a unit and also it may cause other people to trip or slip on them in another instance.
11. When you are going to move the finisher, first check to see that no personnel or customers are around a dangerous position.
12. Carefully observe cautions itemized in this Maintenance Manual for your operations.
13. Be sure that nobody touches the finisher and carefully recheck if there is incorrect wiring, incorrect connections, or tools remaining on the finisher before turning ON the finisher.
14. Replace all the covers of the finisher back to their original position and make the final checks without fail.
15. Before handing the finisher over to the customer, perform overall checking again.

Chapter 3. General Information

This chapter describes the cautions and matter in general in relationship to the maintenance. It is particularly essential to read the following.

3.1. Maintenance Precautions

1. Thoroughly read through and understand the instructions to handle the finisher safely as described in Chapter 2, “Safe Handling of the Finisher,” on page 2-1.
2. Do not place such parts as screws on the upper cover as these may fall off and get astray.

3.2. Powering ON and OFF the Finisher

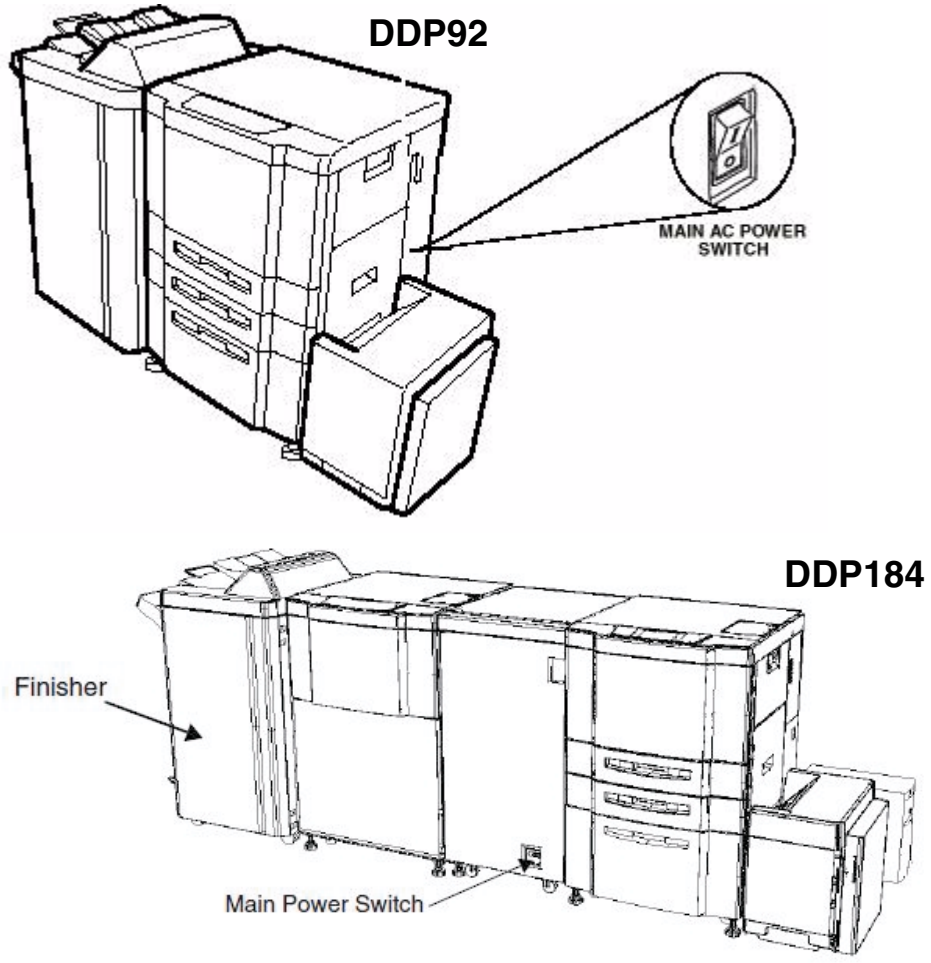


Figure 3-1. Location of the Main AC Power Switch

3.3. Tool Required

The tools which are necessary for servicing the finisher are listed below.

Table 3-1. Names of General Tools - Scale in metric

Item	NAME	SPECIFICATION
1.	Philips Screwdriver	No. 2 Medium Shaft length ; approx. 100mm
2.	Jeweler's Screwdriver Set	Set Tip width 2.0 to 2.5 mm
3.	Long Nose Chain Plier with side cutter (Radio Nipper)	
4.	Push-Pull Scale	3 kg
5.	Adjustable Open End Wrench	Span 30mm
6.	Stapler Jig	Part No. G8581457 (N426067)

Table 3-2. Measurement Instruments

Item	NAME	USAGE
1.	Multimeter	Measurement of Voltage and Resistance

Table 3-3. Consumables

Item	NAME	USAGE
1.	Lint-Free Cloth	Cleaning contaminated areas of the finisher

3.4. Switch & Sensor Locations

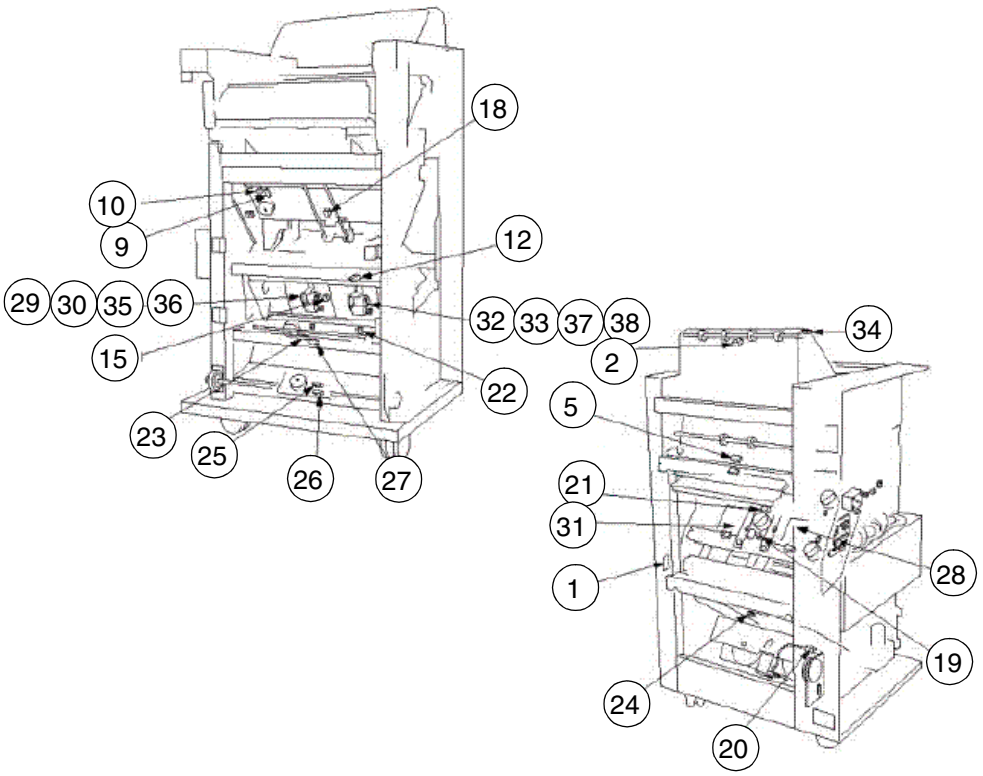


Figure 3-2. Location of all Switches & Sensors

Table 3-4. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
1.	Interlock	MS1		2	33	FS	
2.	Sub-tray paper exit PS	PS1		3	5	FS	
3.	Tray upper-limit PS	PS2		2	18	FS	
4.	Tray lower-limit PS	PS3		1	14	FS	
5.	FIN entrance passage PS	PS4		4	10	FS	
6.	Stacker conveyance passage PS	PS5		5	11	FS	
7.	Paper exit-1 PS	PS6		8	24	FS	
8.	Staple paper exit upper-limit PS	PS7		2	18	FS	
9.	Alignment-plate/upper HP PS	PS8		13	9	FS	
10.	Paper exit-belt HP PS	PS9		13	9	FS	
11.	Paper exit-2 PS	PS10		8	24	FS	
12.	Stapler-movement HP PS	PS11		12	3	FS	
13.	Paper exit-opening PS	PS12		10	14	FS	

Table 3-4. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
14.	Sub-tray full PS	PS36		3	32	FS	
15.	Stapler-rotation HP PS	PS14		16	15	FS	
16.	Tray no-paper detection PS	PS15		1	14	FS	
17.	Roller-shift HP PS	PS18		7	3	FS	
18.	Stacker no-paper detection PS	PS20		13	21	FS	

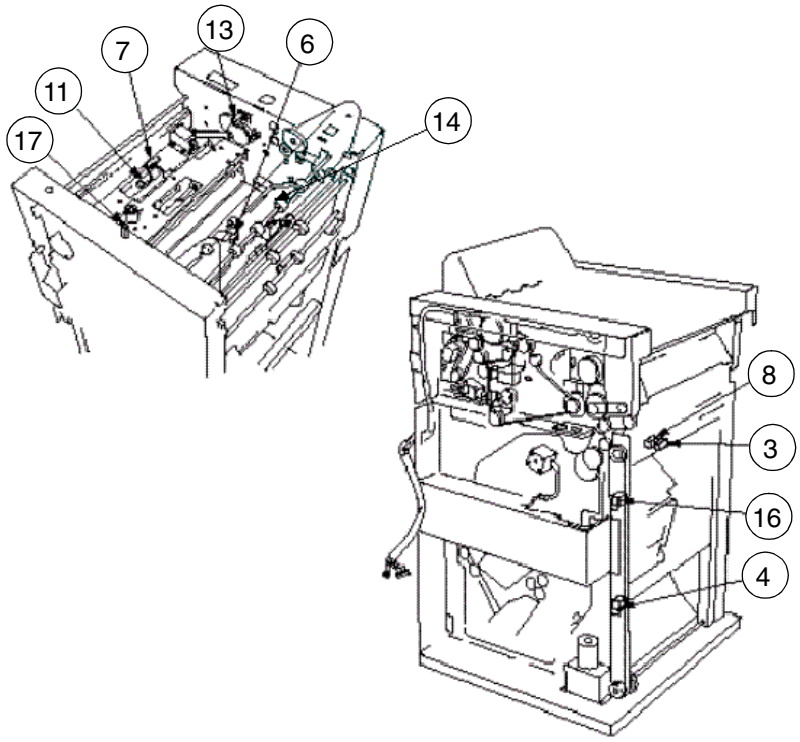


Figure 3-3. Location of all Switches & Sensors

Table 3-5. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
19.	Stapling and folding stopper-release-motor HP PS	PS21		19	17	FS	
20.	Folding-knife HP PS	PS22		23	3	FS	
21.	Stapling and folding stopper HP PS	PS23		19	25	FS	
22.	Alignment-plate/lower HP PS	PS24		18	3	FS	
23.	Folding paper-exit PS	PS25		20	20	FS	

Table 3-5. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
24.	Folding passage PS/2	PS26		21	7	FS	
25.	Folding stopper HP PS	PS27		22	3	FS	
26.	Folding passage PS/1	PS28		22	7	FS	
27.	Folding full up PS	PS29		20	20	FS	
28.	Clincher HP PS/R	PS30		16	17	FS	
29.	Stapler HP PS/R	PS31		16	17	FS	
30.	Clincher timing PS/R	PS32		16	17	FS	
31.	Clincher HP PS/F	PS33		15	19	FS	
32.	Stapler HP PS/F	PS34		15	19	FS	
33.	Clincher timing PS/F	PS35		15	19	FS	
34.	Paper exit-cover open/close detection PS	PS207		3	5	FS	
35.	Cartridge detection SW/R	SW1		16	17	FS	
36.	Staple detection SW/R	SW2		16	17	FS	
37.	Cartridge detection SW/F	SW3		15	19	FS	
38.	Staple detection SW/F	SW4		15	19	FS	

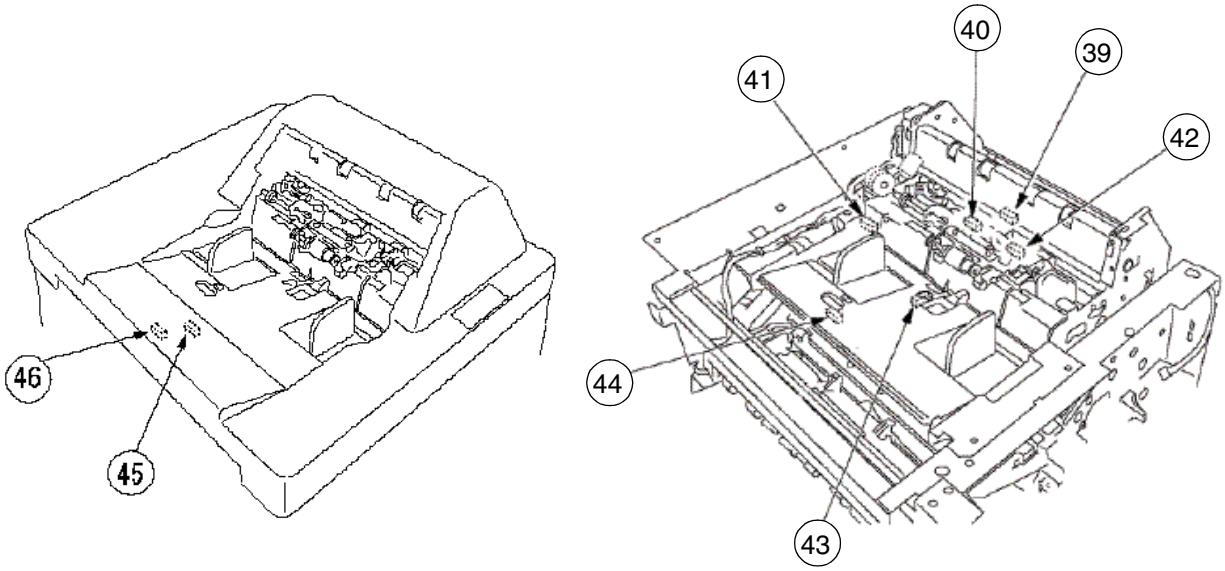


Figure 3-4. Location of all Switches & Sensors

Table 3-6. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
39.	Sheet passage PS	PS201		3	17	PI	
40.	No-sheet PS	PS202		3	17	PI	

Table 3-6. Names of Switches & Sensors

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
41.	Sheet-tray lower-limit PS	PS203		4	4	PI	
42.	Sheet-tray upper-limit PS	PS204		3	17	PI	
43.	Sheet set PS	PS208		1	9	PI	
44.	Pre no-paper PS	PS209		1	1	PI	
45.	Pre no-paper PS/2	PS205		1	9	PI	
46.	Pre no-paper PS/3	PS206		1	9	PI	

3.5. Motor, Solenoid, Clutch & PCB Locations

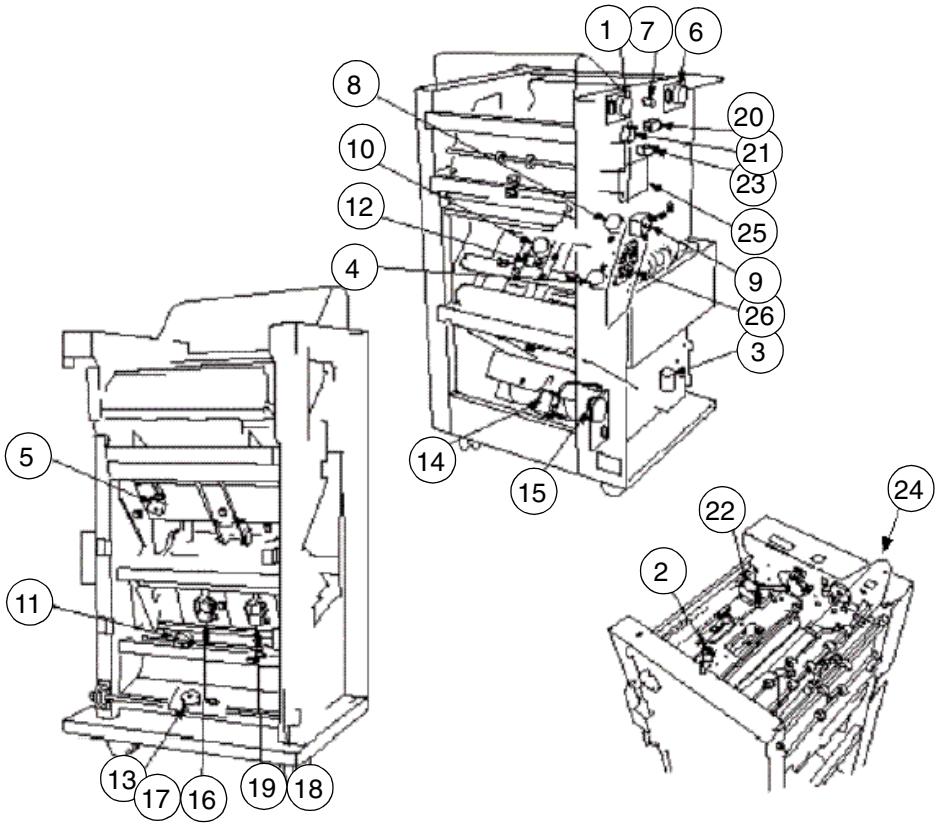


Figure 3-5. Location of all Motors, Solenoids, Clutches, and PCBs

Table 3-7. Names of Motors & Solenoids

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
1.	M1 FNS conveyance motor	M1		10	1	FS	
2.	Roller-shift motor	M2		7	1	FS	
3.	Tray up-down motor	M3	4.3.4 Page 4-9	6	22	FS	
4.	Stapler rotation motor	M4		17	7	FS	
5.	Alignment-plate/upper motor	M5		13	10	FS	
6.	Paper exit-roller motor	M7		9	8	FS	
7.	Paper exit-opening motor	M8		10	23	FS	
8.	Stapler-movement motor	M11		17	7	FS	
9.	Stacker entrance motor	M13		14	23	FS	
10.	Stapling and folding stopper motor	M14		19	20	FS	
11.	Alignment-plate/lower motor	M15		18	1	FS	
12.	Stapling and folding stopper release motor	M17		19	9	FS	

Table 3-7. Names of Motors & Solenoids

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
13.	Folding-stopper motor	M18		23	1	FS	
14.	Folding-knife motor	M19		23	1	FS	
15.	Folding conveyance motor	M20		24	23	FS	
16.	Clincher motor-R	M21	6.2.4 Page 6-19	16	17	FS	
17.	Stapler motor-R	M22	4.3.3 Page 4-7	16	17	FS	
18.	Clincher motor-F	M23	6.2.4 Page 6-19	15	19	FS	
19.	Stapler motor-F	M24	4.3.3 Page 4-7	15	19	FS	
20.	Gate solenoid	SD1		11	10	FS	
21.	Sub-tray paper exit solenoid	SD2		11	10	FS	
22.	Paper exit-opening solenoid	SD4	4.3.5 Page 4-10	8	1	FS	
23.	By-pass solenoid	SD5		11	10	FS	
24.	Sub-tray solenoid	SD6		7	19	FS	
25.	FS-108H/HBM P/K			1	8	FS	
26.	RB-108H P/K			12	10	FS	

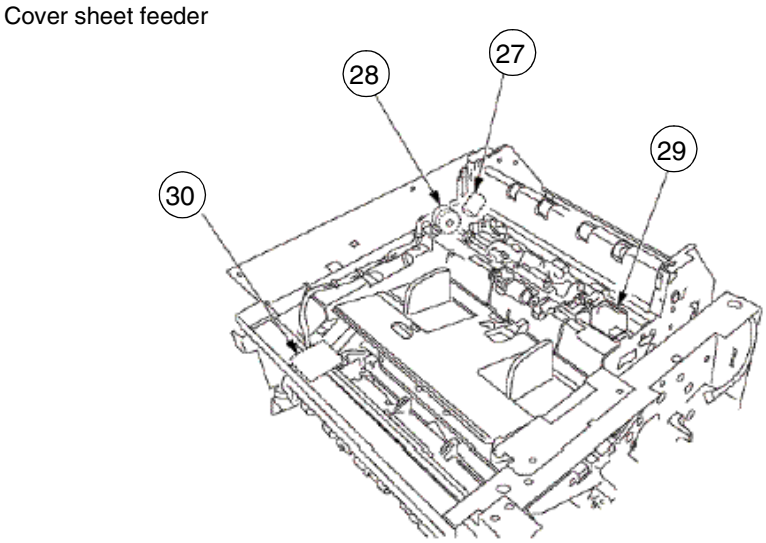


Figure 3-6. Location of all Motors, Solenoids, Clutches and PCBs

Table 3-8. Names of Motors, Solenoids, Clutches and PCBs

No.	Name	Marks	Maintenance Ref. + Page	Parts Catalog			Remarks
				List	Item No.	Block	
27.	Sheet-tray motor	M201		4	16	PI	
28.	Paper feed clutch	MC201		4	13	PI	
29.	Paper feed solenoid	SD201		3	24	PI	
30.	PI-108H P/K			1	6	PI	

3.6. Standard Finisher Circuit Diagram

Note: PS means Photo Sensor. SW means Switch. SD means Solenoid.
M means Motor. MC means Magnetic Clutch.

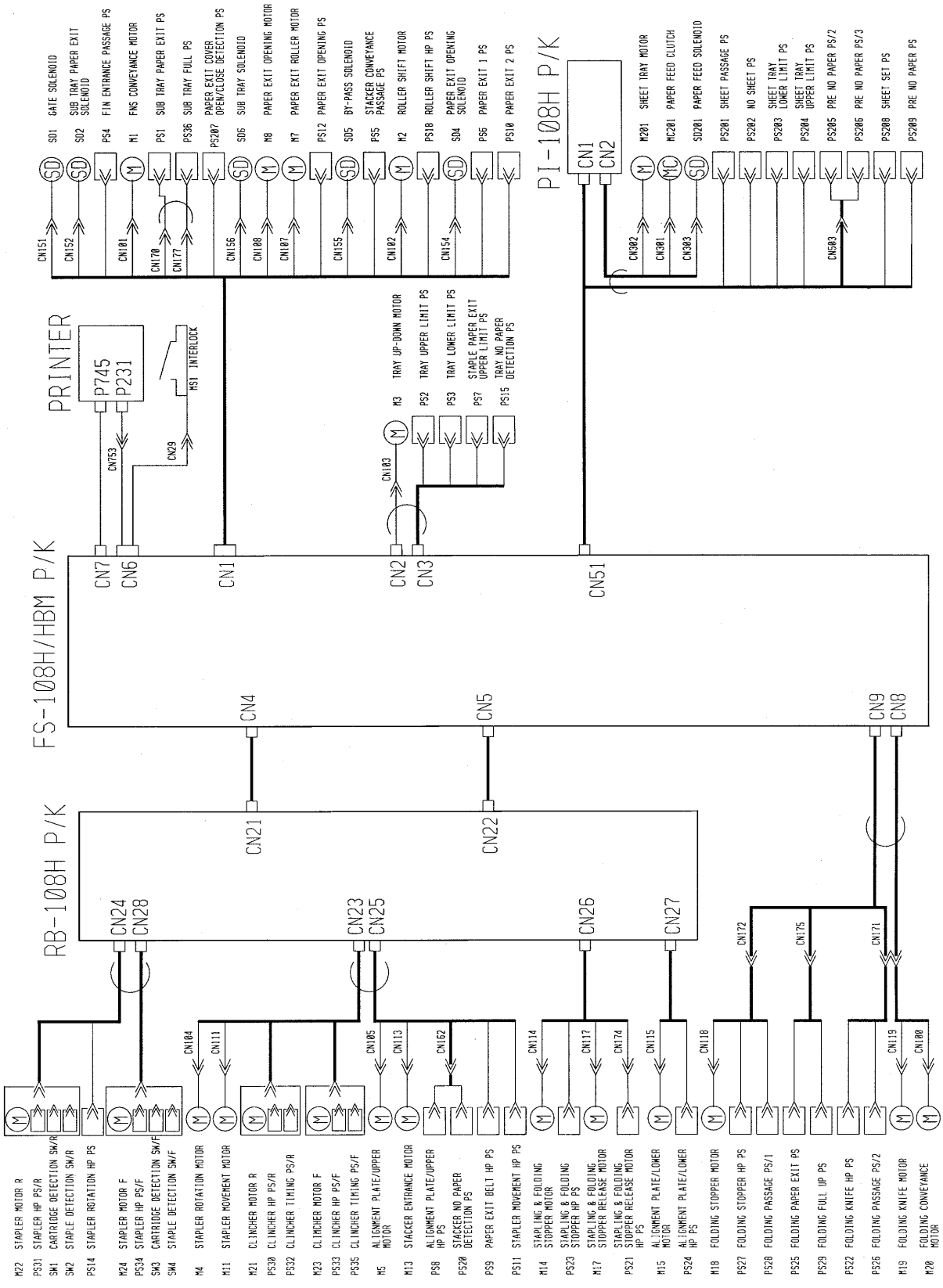


Figure 3-1. Standard Finisher Circuit Diagram

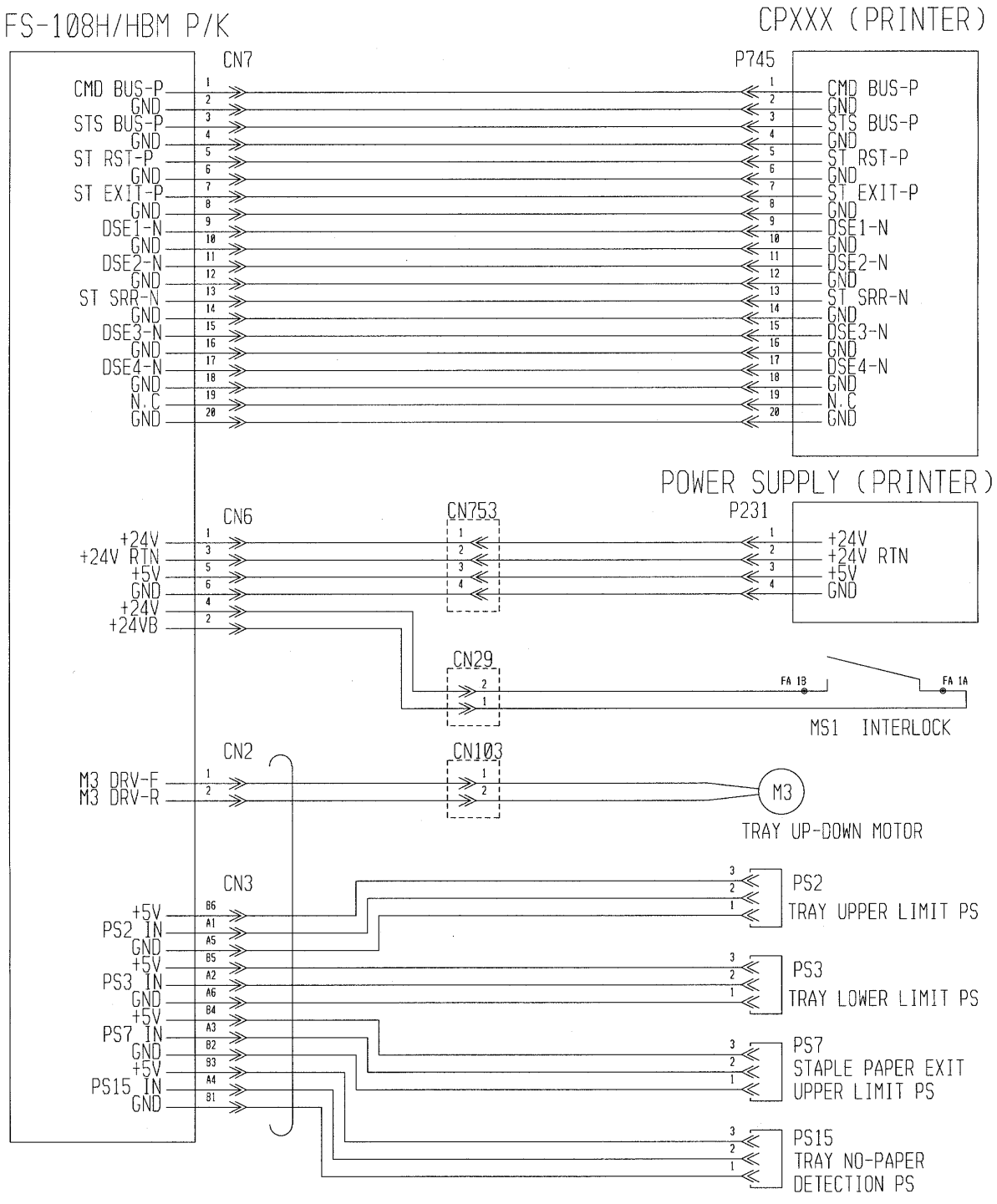


Figure 3-2. Standard Finisher Circuit Diagram

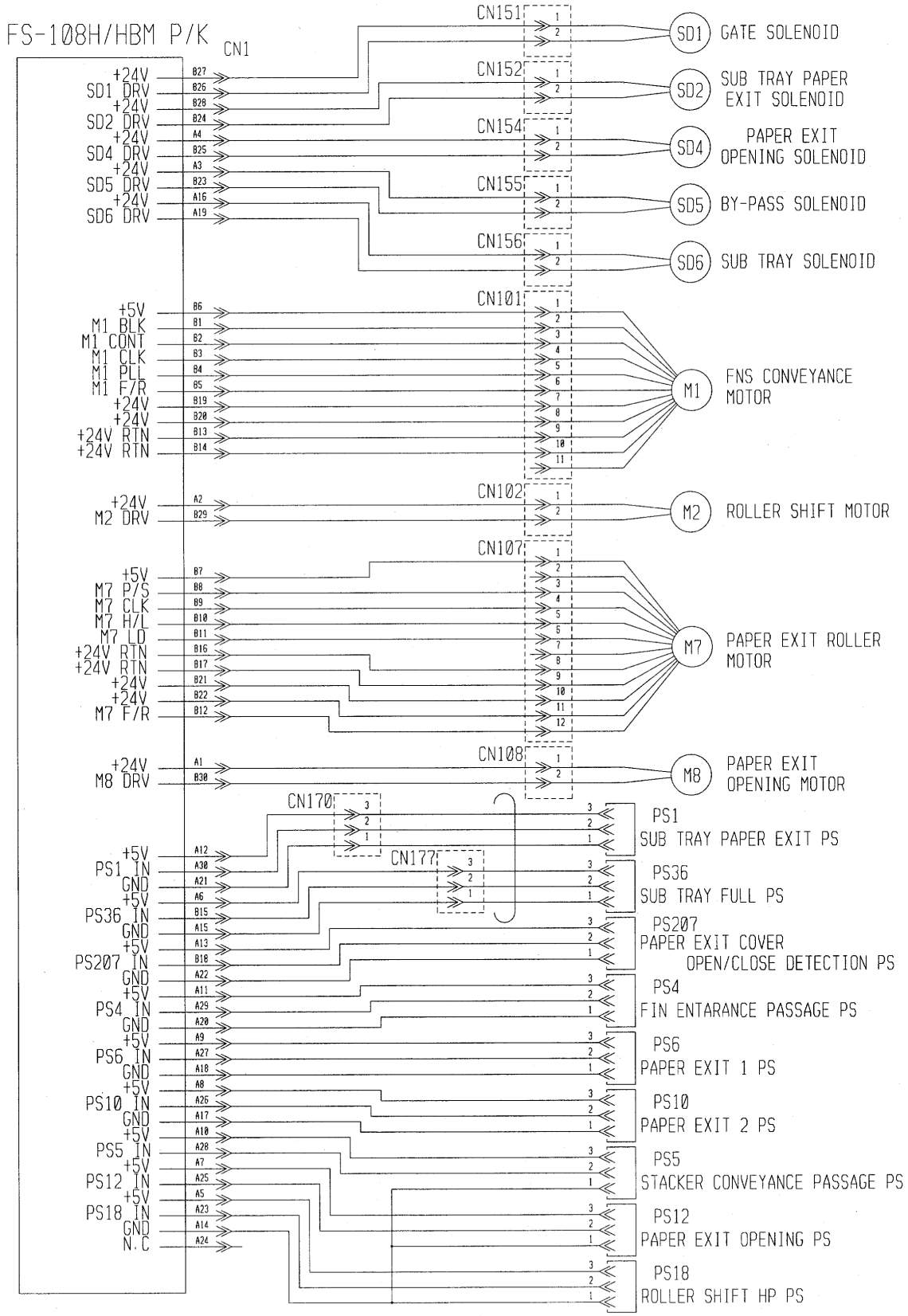


Figure 3-3. Standard Finisher Circuit Diagram

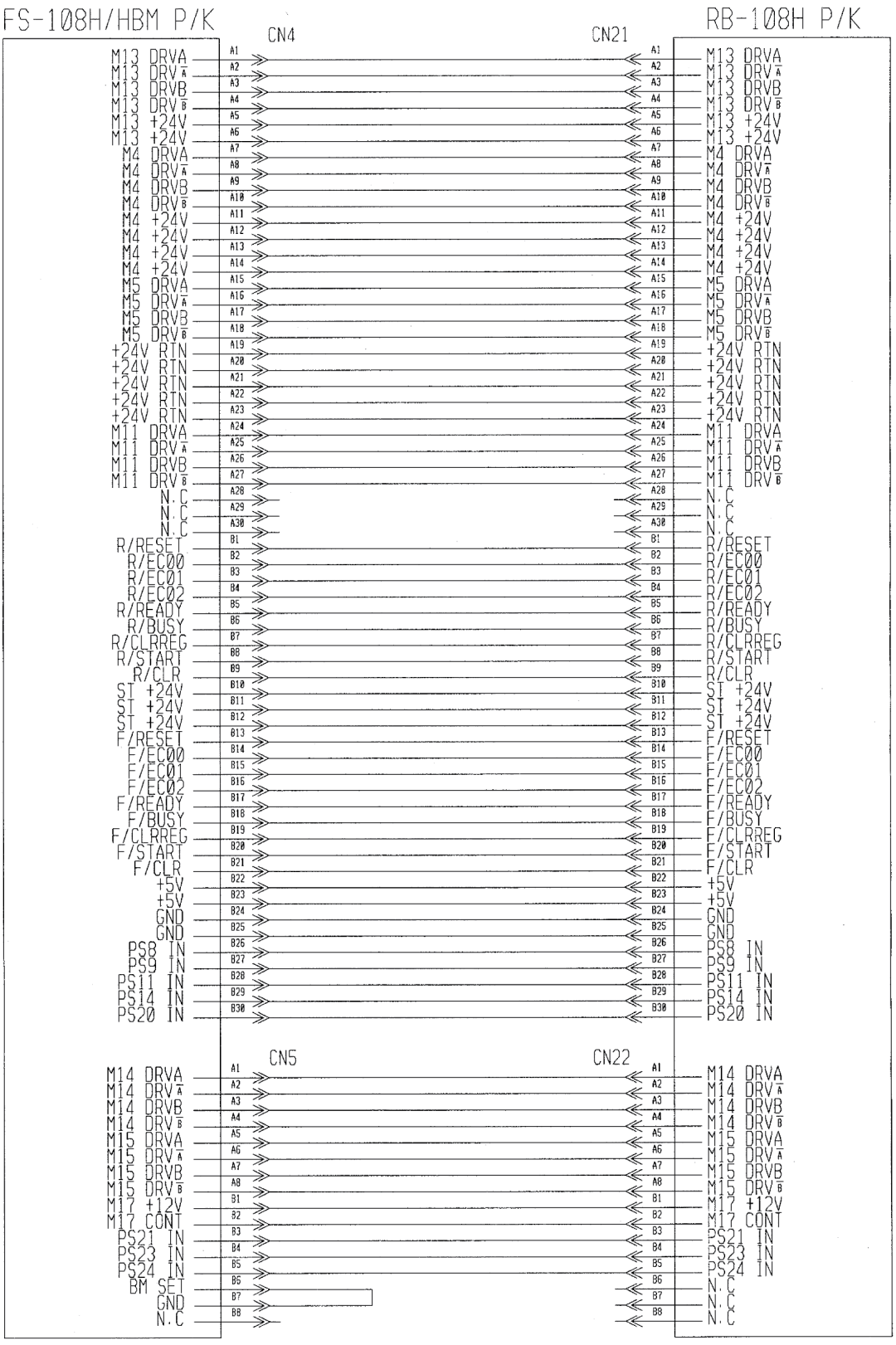


Figure 3-4. Standard Finisher Circuit Diagram

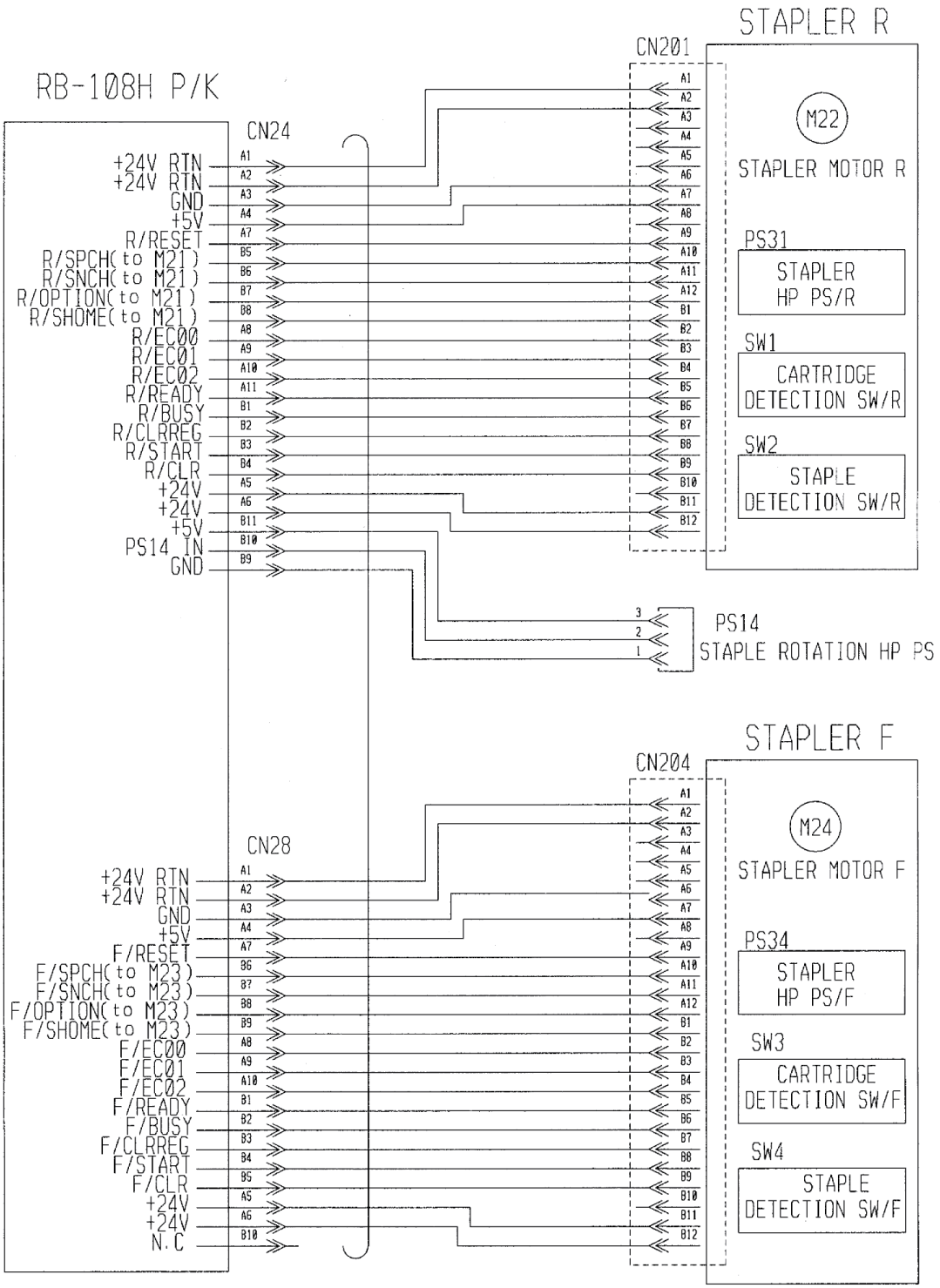


Figure 3-5. Standard Finisher Circuit Diagram

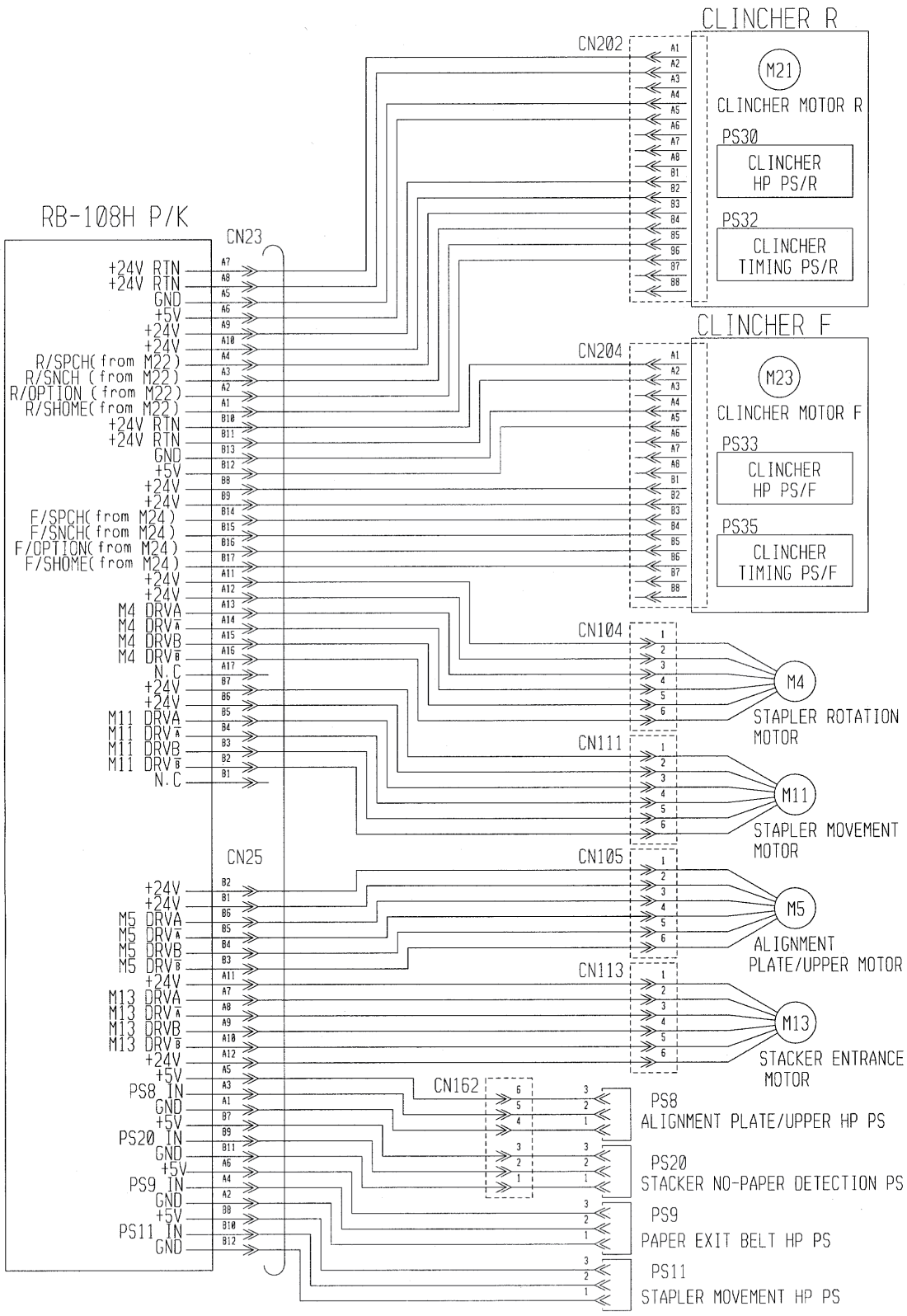


Figure 3-6. Standard Finisher Circuit Diagram

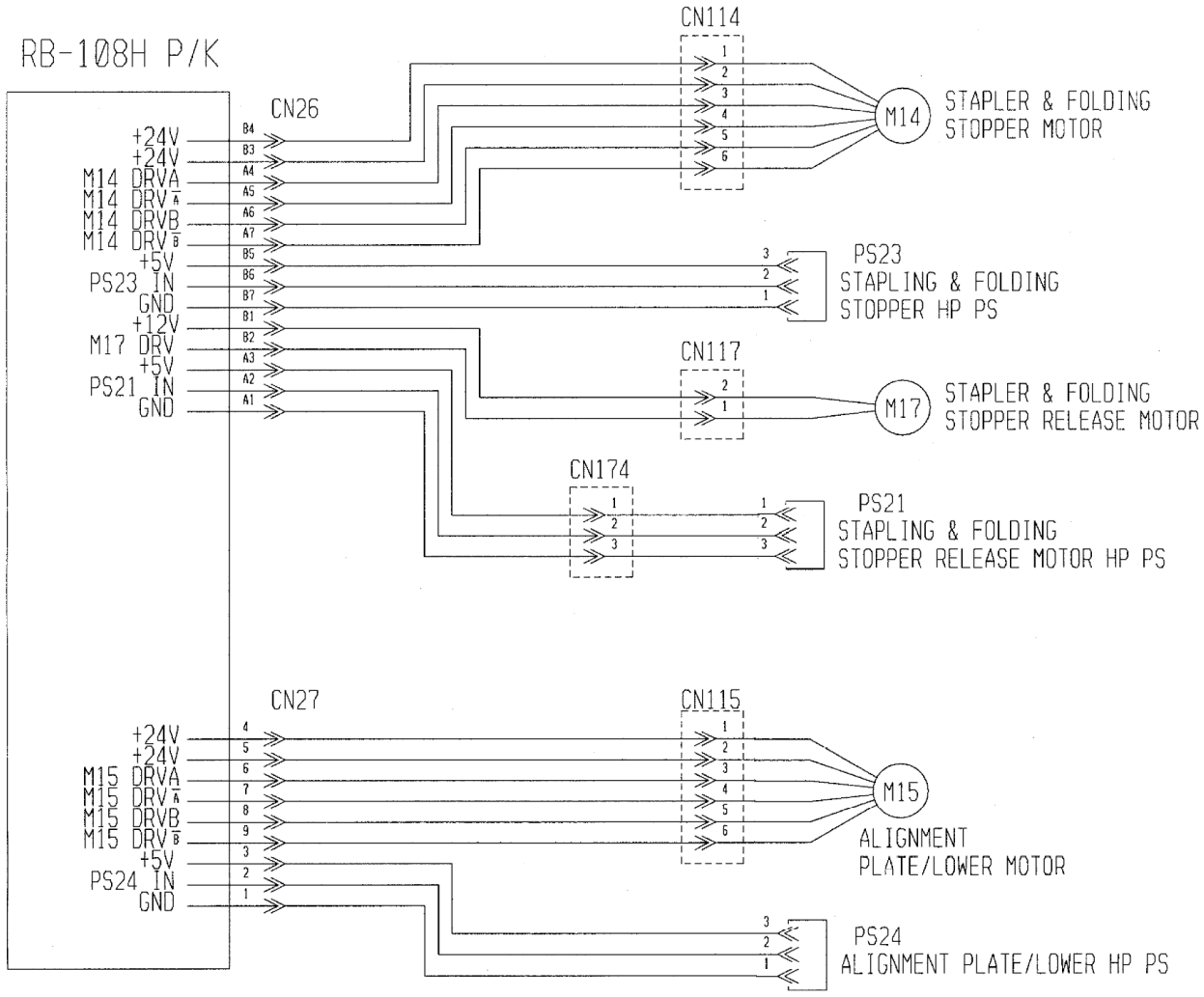


Figure 3-7. Standard Finisher Circuit Diagram

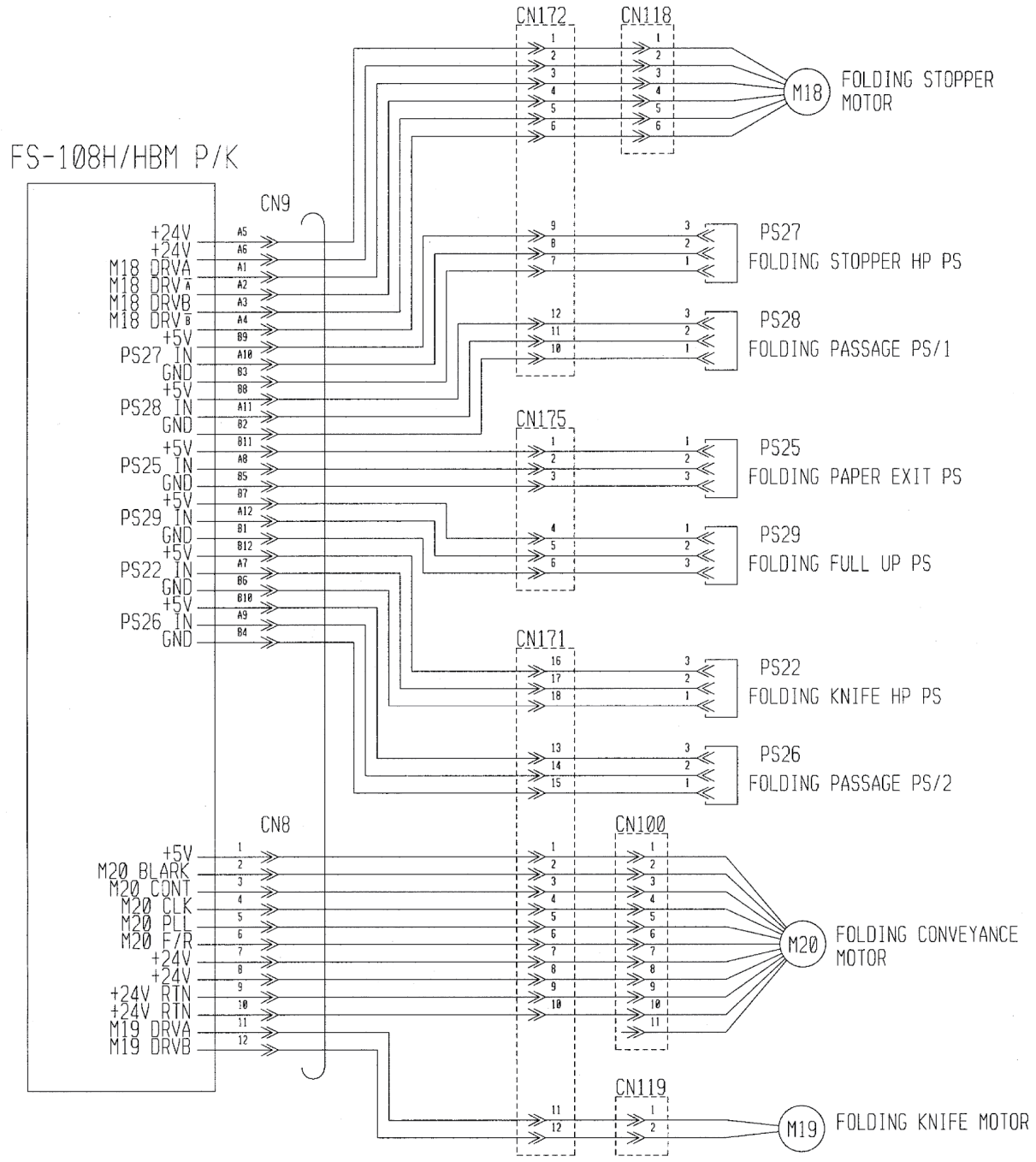


Figure 3-8. Standard Finisher Circuit Diagram

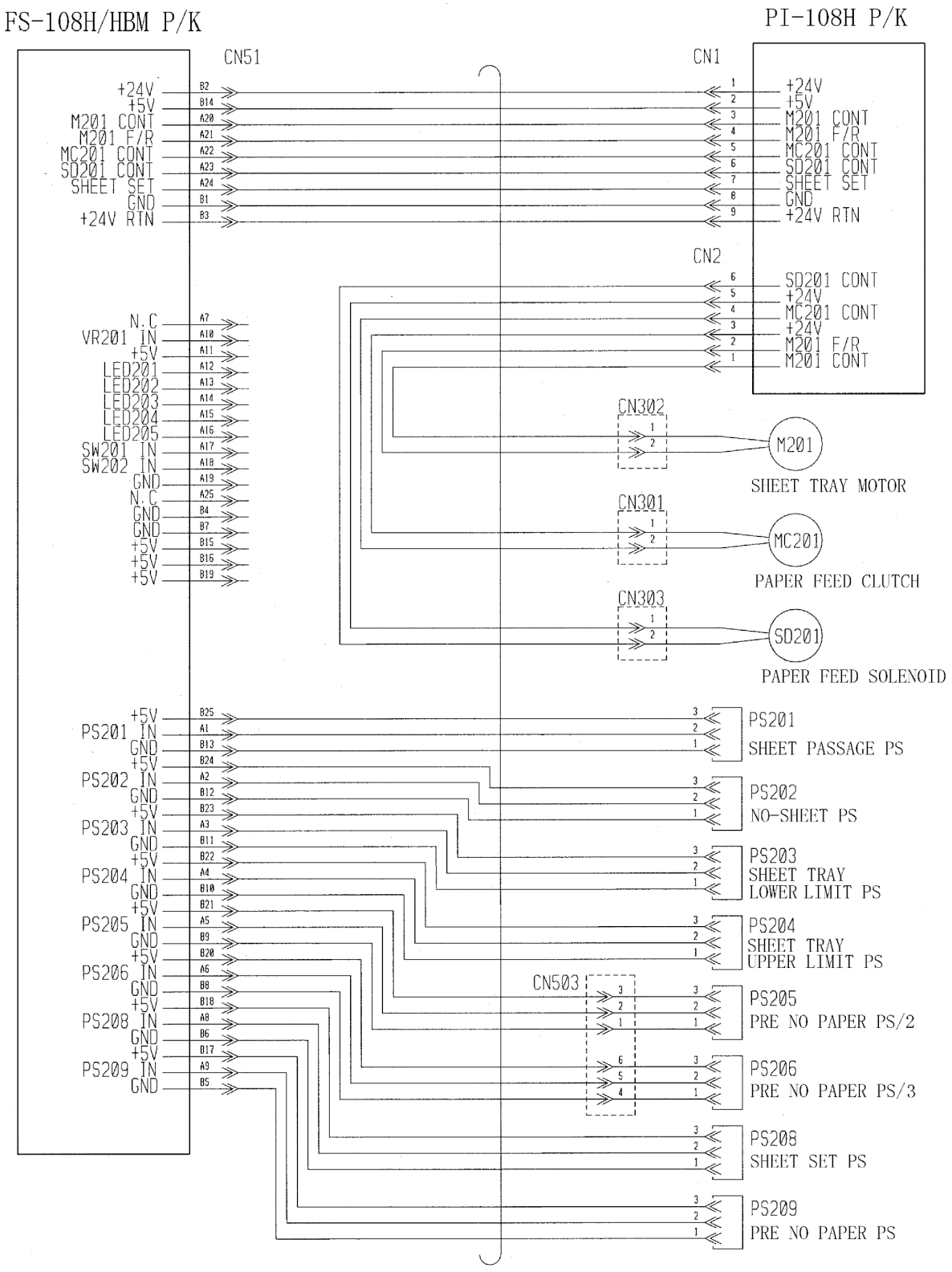


Figure 3-9. Standard Finisher Circuit Diagram

Chapter 4. Preventive Maintenance

This section contains information for maintaining the finisher for continuous failure-free, high quality performance. Including in this section are procedures for cleaning the exterior and interior of the finisher.
While performing any maintenance procedure, visually inspect the finisher for loose, broken or missing cables, connectors or other parts.

PREVENTIVE MAINTENANCE SCHEDULE

For many of the preventive maintenance procedures, there are no set times to perform them. The determining factor for when to perform a procedure depends on the extent of use. Finishers that are used more heavily will require more frequent preventive maintenance.

4.1. Periodic check and Cleaning by Customer Engineer

This section describes maintenance items and the frequencies performed by customer engineers.
If any maintenance is noted with plural frequencies, an inspection is to be made on an earlier schedule. Check intervals are based on the standard printer operating conditions described below. Check the operating conditions and make sure that maintenance and checks are performed at intervals appropriate for the actual condition.

1. Standard usage - Printing volume : 300 K Images/month
   Power on time : 200 hrs/month
   Operating time : 60 hrs/month

Table 4-1. Items and intervals of periodic check and cleaning

Item No.	Items	Frequency	Work time (min.)	Note
1.	Cleaning of Conveyance rollers	400 k images	5	
2.	Cleaning of covers	Per visit	3	
3.	Checking of Drive mechanism	400 k images	10	If strange noise comes from the drive mechanism due to insufficient grease, grease it. (Grease is for plastic)
4.	Cleaning of Pressure Roller Shaft (Sub-Tray Paper Exit Roller C)	1,200 k images	5	Grease is spread.

4.2. Parts for Periodical Replacements and Frequencies by Customer Engineer

Table 4-2. Parts for periodic replacement and frequencies

Item No.	Periodic Replacement	DWG. No.	Qty	Frequencies	Work time reqd. (min.)	Maint. Manual
1.	Paper exit roller	G8501111 (N421840)	10	800 k images	15	
2.	Paper exit roller in the stacker/stapler unit	G8501111 (N421840)	4	400 k images	10	
3.	Stapler	G8581127 (N424790)	2	250 k staples	20	
4.	Tray up-down motor	G8581074 (N424733)	1	4,800 k images	15	
5.	Paper exit opening solenoid	G8501079 (N421808)	1	7,200 k images	20	

Note: Frequencies are counted with a mechanical counter and their life is not displayed on the Operator Panel of the printer. Figures of such mechanical counter shall be written down on a memo when replacing the parts in order to know when they should be replaced.

4.3. Procedure of Replacing the Parts for Periodical Replacement

4.3.1. Replacing the Paper Exit Roller

Applicable jigs and tools: Jewel Screwdriver.

[Disassembling Procedures]

1. Push the Tray Upper-limit Sensor beside the Paper Exit Roller, then the Main Tray goes down.
2. Open the Front Cover to make the Main Tray stopped.
3. Turn OFF the MAIN AC POWER.

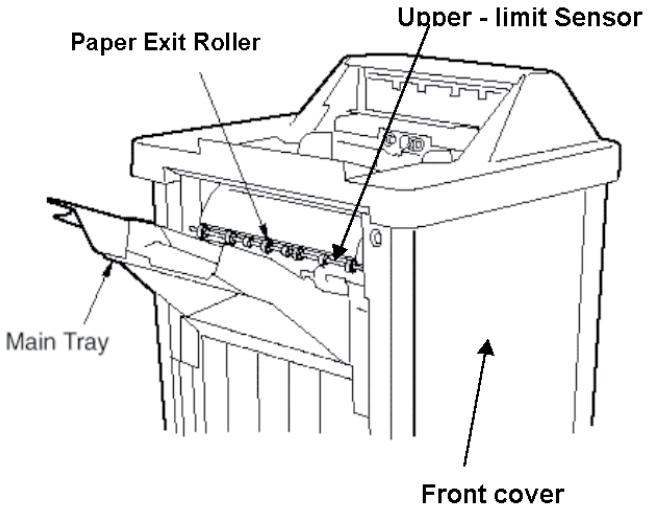


Figure 4-1. Removal of the Paper Exit Roller

4. Insert the end of a screwdriver into the slot of the Paper Exit Roller, and twist the screwdriver to pry the roller open.

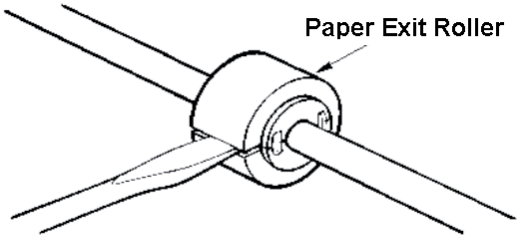


Figure 4-2. Removal of the Paper Exit Roller

[Assembling Procedures]

1. Align the grooves of the new Paper Exit Roller with the shaft.
2. Press the rollers until click sounds, so that they can be properly installed.
3. Close the Front Cover.

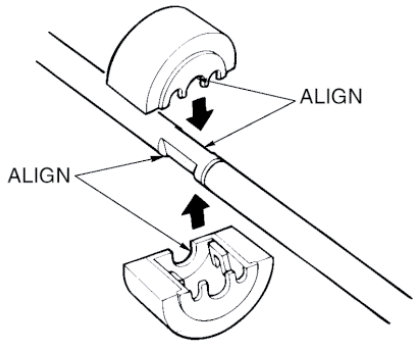


Figure 4-3. Assembling of the Paper Exit Roller

4.3.2. Replacing the Paper Exit Roller in the Stacker/stapler Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: Jewel Screwdriver.

[Disassembling Procedures]

1. Open the Front Cover and pull out the Stacker/stapler Unit.

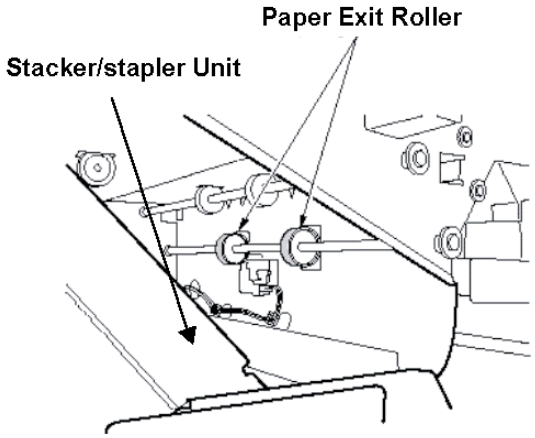


Figure 4-4. Removal of the Paper Exit Roller

2. Insert the end of a screwdriver into the slot of the Paper Exit Roller, and twist the screwdriver to pry the roller open.

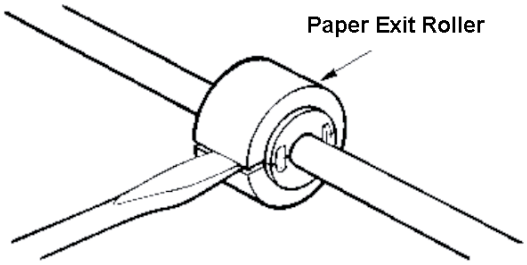


Figure 4-5. Removal of the Paper Exit Roller

[Assembling Procedures]

1. Align the grooves of the new Paper Exit Roller with the shaft.
2. Press the rollers until click sounds, so that they can be properly installed.
3. Close the Stacker/stapler Unit and the Front Cover.

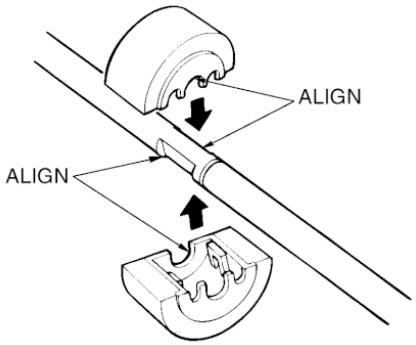


Figure 4-6. Assembling of the Paper Exit Roller

4.3.3. Replacing the Stapler

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Stapler jig.

[Disassembling Procedures]

1. Remove the Front Cover. (Refer to item 6.1.3 on page 6-3)
2. Pull out the Stacker/stapler Unit by pulling on the handle.
3. Remove the Cartridge from the Stapler.
4. Remove the +screw holding the Staple Cover and remove the Staple Cover.

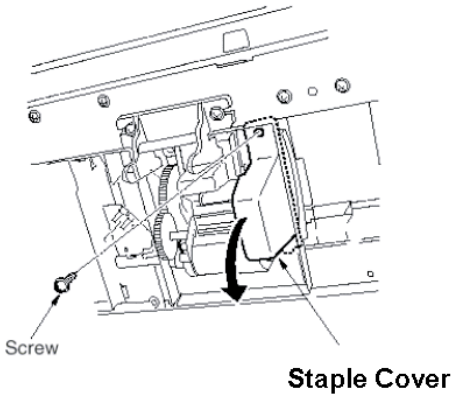


Figure 4-7. Removal of the Staple Cover

5. Detach the Connector and remove the 4 +screws holding the Stapler.

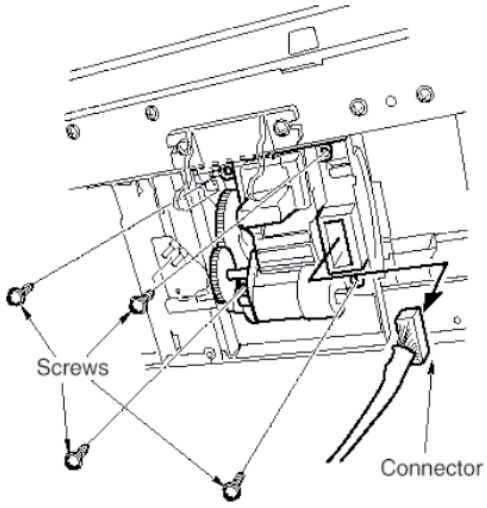


Figure 4-8. Removal of the Stapler

6. Lift the Stapler slightly and remove it.

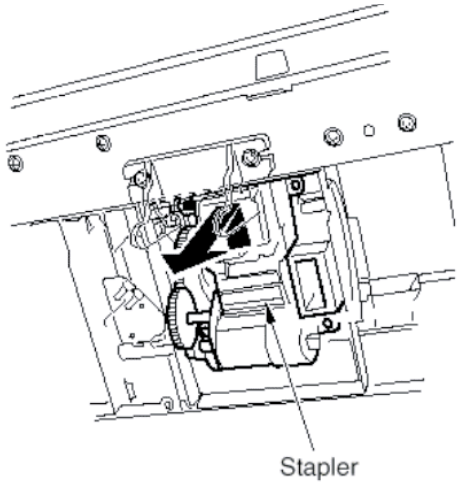


Figure 4-9. Removal of the Stapler

[Assembling Procedures]

1. Reinstall the Stapler by reversing the procedure above.
1. Adjust the Stapler vertical positioning. (Refer to item 6.3.17 on page 6-52)

4.3.4. Replacing the Tray Up-down Motor

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Detach the Connector and remove the 2 +screws holding the Tray Up-down Motor and remove the tray Up-down Motor.

CAUTION:
Take out the Tray Up-down Motor while supporting the Main Tray by hand.

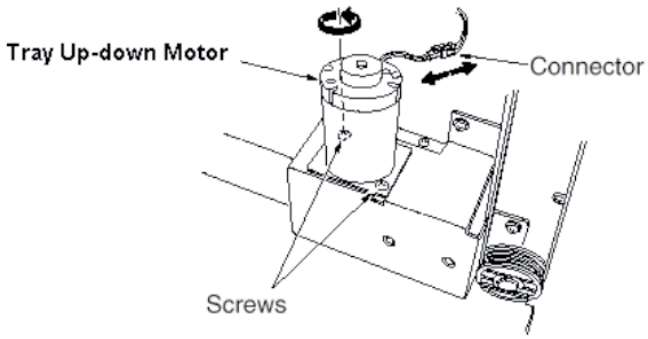


Figure 4-10. Removal of the Tray Up-down Motor

[Assembling Procedures]

1. Reinstall the Tray Up-down Motor by reversing the procedure above.

4.3.5. Replacing the Paper Exit Opening Solenoid

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, pliers, scale.

[Disassembling Procedures]

1. Remove the Rear Cover and the Top Cover. (Refer to item 6.1.2 on page 6-2) and (Refer to item 6.1.4 on page 6-4)
2. Remove the +Screws and the Spring.
3. Remove the Paper Exit Opening Solenoid.

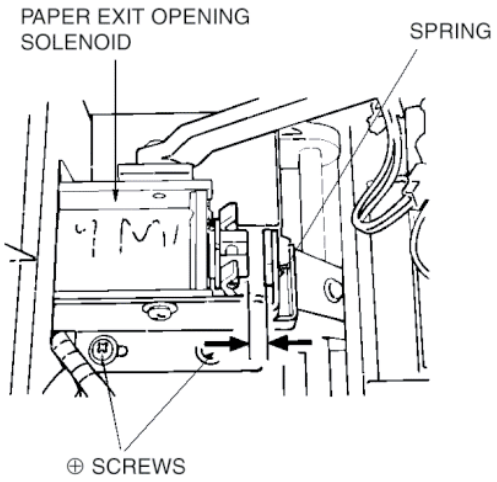


Figure 4-11. Removal of the Paper Exit Opening Solenoid

[Assembling Procedures]

1. Reinstall the Paper Exit Opening Solenoid reversing the procedure above.
2. Adjust the position of the Paper Exit Opening Solenoid. (Refer to item 6.3.8 on page 6-40) and (Refer to item 6.3.9 on page 6-42)

Chapter 5. Troubleshooting

5.1. Troubles

5.1.1. Abnormal stacking

PRIMARY FACTOR;	The condition of stacked paper on the Main Tray is abnormal. Note: If paper stacked on each tray is beyond the capacity indicated in Table 1-1, abnormal stacking may occur.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The paper is curled.	Replace: Paper	
	2. The paper is skewed at the Paper Exit Unit. (1) Paper Exit Opening does not close correctly.	Adjust: Paper Exit Opening Solenoid (SD4) Replace: Paper Exit Opening Solenoid (SD4)	6.3.8, 6-40 4.3.5, 4-10
	3. Sponge Roller fault.	Replace: Paper Exit Roller	4.3.1, 4-3
	4. The stacked paper is beyond the capacity.	Remove: Paper	
	5. The various size paper is stacked.	Remove: Paper	

Stacking Capability (in case of a size of paper that is stacked on the same tray)

1. Staple mode

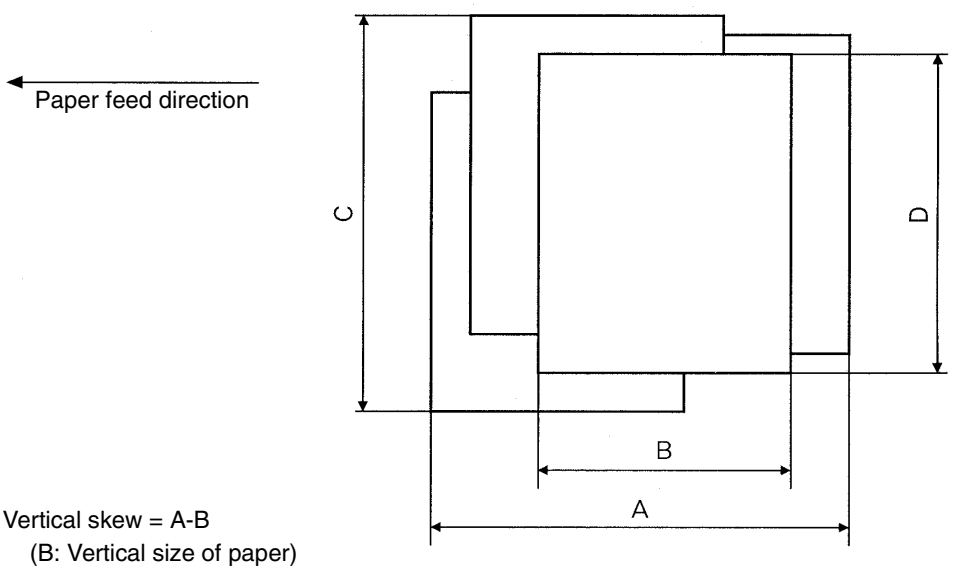
		Vertical skew	Horizontal skew
in a bundle *1	15 sheets or less	1.5mm or less	1.5mm or less
	50 sheets or less	3.0mm or less	3.0mm or less
in some bundles		100mm or less *2	100mm or less *2

2. Non Staple mode

		Vertical skew	Horizontal skew
Main Tray stack-ing (normal)	in some sheets	30mm or less	25mm or less
Main Tray stack-ing (offset)	in a bundle	30mm or less	25mm or less
	in some bundles *3	30mm or less	15 to 45mm
Sub-Tray Stack-ing	in some sheets	60mm or less	60mm or less

Note:

*1:This value is measured near a staple.
If sheets in bundles spread like a folding fan, measure the value after mending its spread.
*2:In case of 2 to 20 sheets and except B5/A3/letter size paper
1 position staple: 120mm,
2 position staple: 250mm
*3:Its value is measured between a bundle and the next bundle.
*4:If stacked paper rotates, its maximum value of a rotation is considered to be a skew value.



Vertical skew = A-B
(B: Vertical size of paper)
Horizontal skew = C-D
(D: Horizontal size of paper)

Figure 5-1. Vertical/Horizontal sizes of paper

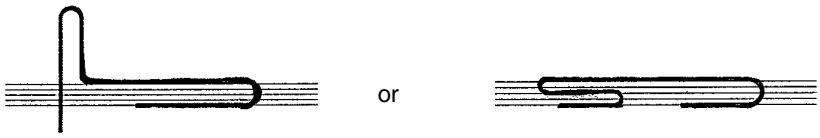
5.1.2. Stapling failure

PRIMARY FACTOR;

(a) The staple does not reach the tip of the Staple Cartridge.
NOTE: The Finisher has a possibility that this phenomenon may occur 5 times per 1,000 staple operations.

(b) The staple remains at the tip of the Staple Cartridge.
NOTE: The Finisher has a possibility that this phenomenon may occur 1 time per 1,000 staple operations.

(c) The staple is folded.
NOTE: The Finisher has a possibility that this phenomenon may occur 5 times per 1,000 staple operations.

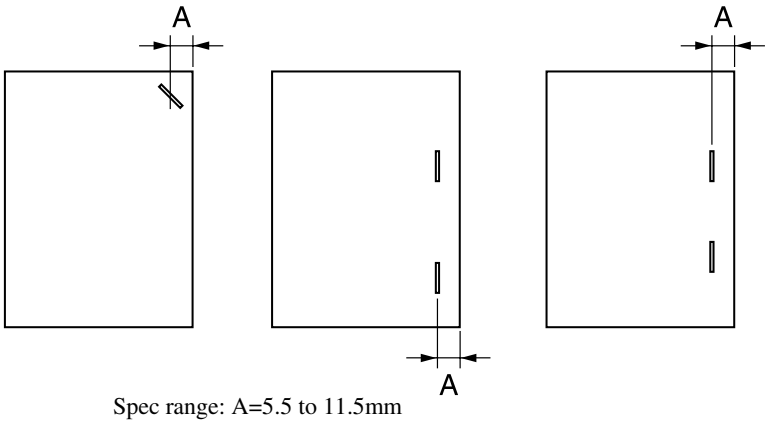


(d) The gap between the paper and a staple is beyond 1mm.
NOTE: The Finisher has a possibility that this phenomenon may occur 5 times per 1,000 staple operations.

PHENOMENON	CAUSES & CHECK POINTS	CORRECTIONS	Maintenance Ref + Page
1. No staple on the paper.	1. The staple does not reach the tip of the Staple Cartridge housing. (E019/E01A error does not occur.)	Replace: Stapler	4.3.3, 4-7
	2. The staple remains at the tip of the Staple Cartridge housing.	Replace: Staple Cartridge housing Stapler	4.3.3, 4-7
2. A staple on the paper.	1. The staple is folded.	Replace: Stapler	4.3.3, 4-7
	2. The gap between the staple and the paper is more than 1mm.	Replace: Stapler	4.3.3, 4-7

5.1.3. Flat Stapling position failure

PRIMARY FACTOR;	The flat stapling position on the paper is beyond the requirements. NOTE: The Finisher has a possibility that this phenomenon may occur 1 time per 200 staple operations.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs continuously.	1. The space "A" is not in the requirement.	Adjust: Flat Stapling stopper	6.3.16, 6-50



Spec range: A=5.5 to 11.5mm
(initial value=8.5mm)

Figure 5-1. Flat Stapling position failure

5.1.4. Staple orientation failure on center stapling/folding mode

PRIMARY FACTOR;	The staple orientation is not parallel with the paper edge.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The Staplers are not parallel with the paper feed direction.	Adjust:Staple orientation	6.3.18, 6-54

5.1.5. Angle of folding position failure

PRIMARY FACTOR;	The angle of folding position is not correct..		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The fold line (the folding stopper) is perpendicular to the conveyance direction.	Adjust: The angle of Folding Stopper.	6.3.19, 6-56
	2. The fold side discrepancy (for A3 paper) is within the limit.	Adjust: The angle of Folding Stopper.	6.3.19, 6-56

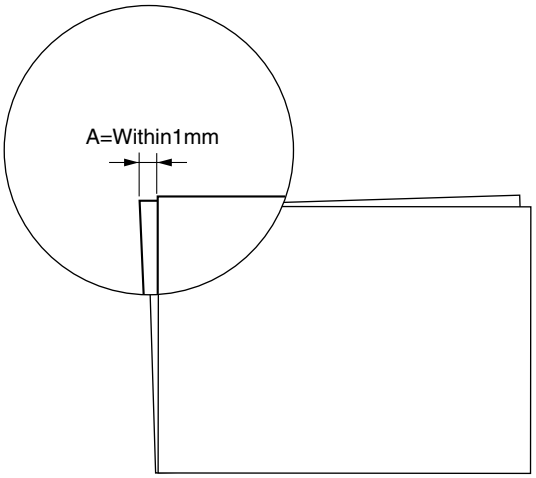


Figure 5-2. Angle of folding position failure

5.1.6. Stapling position failure on center stapling/folding mode

PRIMARY FACTOR;	The stapling position is not at center of paper. **Note 1:** Stapling position may shift from the center of paper when the paper maker, paper type, paper thickness and etc. changes. **Note 2:** Before proceeding, be sure that you have correctly adjusted the angle of the stapling-and-folding stopper (6.3.18, 6-54). **Note 3:** Stapling position can be adjusted using Operator Control Panel by user.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The stapling position is not at center of paper.	Adjust: The Stapling-and-Folding Stopper position.	6.3.23, 6-61 (refer to Note 3)

5.1.7. Folding position failure on center stapling/folding mode

PRIMARY FACTOR;	The stapling position is not at center of paper. **Note 1:** Folding position may shift from the center of paper when the paper maker, paper type, paper thickness and etc. changes. **Note 2:** Before proceeding, be sure that you have correctly adjusted the angle of the stapling-and-folding stopper (6.3.19, 6-56). **Note 3:** Folding position can be adjusted using Operator Control Panel by user.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. Paper is not folded at the center for each paper size.	Adjust: The Folding Stopper position.	6.3.24, 6-64 (refer to Note 3)
	2. Trailing edge of the folded paper is not within the limit for each paper size.	Adjust: The Folding Stopper position.	6.3.24, 6-64 (refer to Note 3)

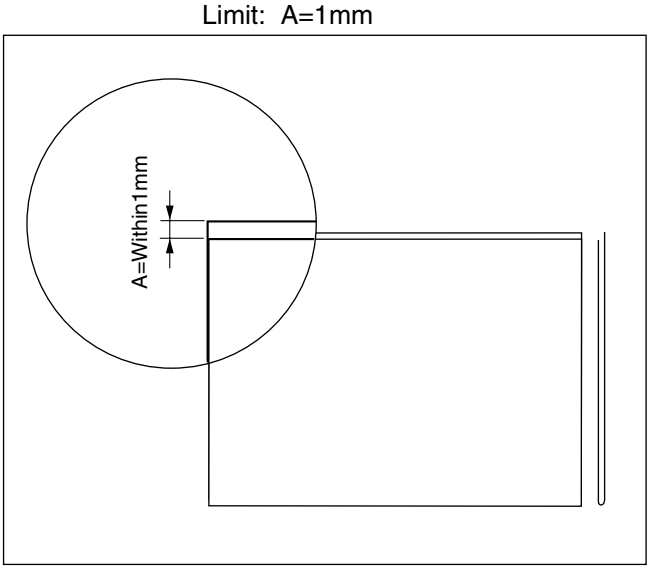


Figure 5-3. Angle of folding position failure

5.1.8. Paper order is reserve

PRIMARY FACTOR;	The 1st and 2nd page are reverse on Staple mode of short size paper.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. By-pass solenoid does not operate.	Replace: By-pass solenoid	3.4, 3-3

5.1.9. Folding unit does not appear on the OCP.

PRIMARY FACTOR;	Folding unit does not appear on the OCP though the Folding unit is connected. **Note:** Finisher judges that the Folding unit is connected when a level of the "BM SET signal" is low. (B6 pin and B7 pin of CN5 are connected.)		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. PCB fault.	Replace: FS-108HBM P/K	3.5, 3-7
	2. The breaking of cables.	Repair the cable between B6 pin and B7 pin of CN5.	

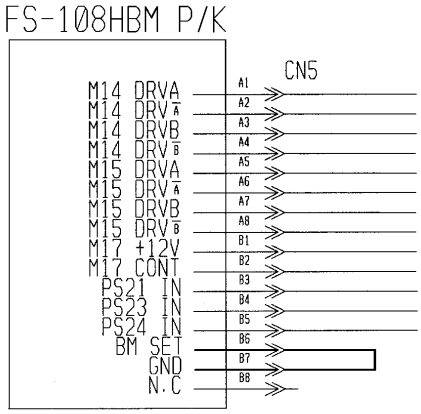


Figure 5-4. Folding unit does not appear on the OCP

5.1.10. Cover Sheet Feeder does not appear on the OCP.

PRIMARY FACTOR;	Cover Sheet Feeder does not appear on the OCP though the Cover Sheet Feeder is connected. **Note:** Finisher judges that the Cover Sheet Feeder is connected when a level of the "SHEET SET signal" is low. (A24 pin of CN51 and 7 pin of CN1 are connected.)		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. PCB fault.	Replace: FS-108HBM P/K Replace: PI-108H P/K	3.5, 3-7
	2. The breaking of cables.	Repair the cable between A24 pin of CN51 and 7 pin of CN1.	

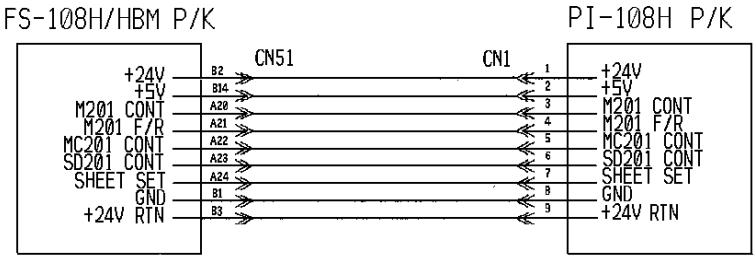


Figure 5-5. Cover Sheet Feeder does not appear on the OCP.

5.2. Error Code Indication

Note: PS in the Circuit Diagram means Photo Sensor.
SD in the Circuit Diagram means Solenoid.
MC in the Circuit Diagram means Magnetic Clutch.
SW in the Circuit Diagram means switch.

Detail Error Code	Error Name	Description	Page No.
E008	FNS COVER SHEET TRAY EMPTY	FNS Cover Sheet Tray is empty.	5-11
E009	SHIFT TRAY FULL 1	Main Tray is full of paper.	5-11
E00A	SHIFT TRAY FULL 2	Paper on the Main Tray is abnormal.	5-11
E00D	SUB TRAY FULL	Sub Tray is full of paper.	5-13
E019	LOW STAPLE (R)	Detected no needle of stapler. (Rear)	5-13
E01A	LOW STAPLE (F)	Detected no needle of stapler. (Front)	5-13
E027	STACKER 4 TABLE FULL	Booklet Tray is full of paper.	5-15
E03E	FINISHER TOP COVER OPEN	Top Cover of the Finisher is open.	5-16
E03F	FINISHER FRONT COVER OPEN	The Finisher Front cover is open.	5-16
E064	PAPER ON PAPER PATH 14 (FIN Entrance Sensor)	Paper is detected on the FIN Entrance Passage PS.	5-17
E065	PAPER ON PAPER PATH 15 (Paper Exit 1 or 2 Sensor)	Paper is detected on the Paper Exit 1 PS or the Paper Exit 2 PS.	5-17
E066	PAPER ON PAPER PATH 16 (Stacker Conveyance Sensor)	Paper is detected on the Stacker Conveyance Passage PS.	5-17
E067	PAPER ON PAPER PATH 17 (Stacker Paper Sensor)	Paper is detected on the Stacker No-Paper Detection PS.	5-17
E068	PAPER ON PAPER PATH 18 (Sub-Tray Exit Sensor)	Paper is detected on the Sub-Tray Paper Exit PS.	5-17
E069	PAPER ON PAPER PATH 30 (Folding Passage PS/2)	Paper is detected on the Folding Passage PS/2.	5-17
E06A	PAPER ON PAPER PATH 31 (Folding Passage PS/1)	Paper is detected on the Folding Passage PS/1.	5-17
E06B	PAPER ON PAPER PATH 32 (Folding Paper Exit PS)	Paper is detected on the Folding Paper Exit PS.	5-17
E06C	PAPER ON PAPER PATH 33 (Sheet Passage PS)	Paper is detected on the Sheet Passage PS.	5-17
E1C3	FNS LEAD JAM 6	Paper did not arrive at Folding Passage PS/1.	5-19
E1C4	FNS LEAD JAM 7	Paper did not arrive at Folding Paper Exit PS.	5-19
E1C5	FNS LEAD JAM 8	Paper did not arrive at Folding Passage PS/2.	5-20
E1C6	FNS TRAIL JAM 7	Paper did not depart from Folding Paper Exit PS.	5-20
E1C7	FNS INSERTER JAM 1	Paper did not arrive at Sheet Passage PS from Cover Sheet Feeder.	5-20
E1C8	FNS INSERTER JAM 2	Paper did not arrive at Stacker Conveyance Passage PS Cover Sheet Feeder.	5-21
E1C9	FNS INSERTER JAM 3	Paper did not arrive at Paper Exit 2 PS from Cover Sheet Feeder.	5-21
E1D0	FNS LEAD JAM 1	Paper did not arrive at FIN Entrance Passage PS.	5-22

Detail Error Code	Error Name	Description	Page No.
E1D1	FNS LEAD JAM 2	Paper did not arrive at Paper Exit 2 PS.	5-22
E1D2	FNS LEAD JAM 3	Paper did not arrive at Stacker Conveyance Passage PS.	5-22
E1D3	FNS LEAD JAM 4	Paper did not arrive at Paper Exit 1 PS.	5-22
E1D5	FNS TRAIL JAM 2	Paper did not depart from Paper Exit 2 PS.	5-22
E1D6	FNS TRAIL JAM 3	Paper did not depart from Stacker Conveyance Passage PS.	5-22
E1D7	FNS TRAIL JAM 4	Paper did not depart from Paper Exit 1 PS.	5-22
E1D8	FNS LEAD JAM 5	Paper did not arrive at Sub-Tray Paper Exit PS.	5-22
E1D9	FNS TRAIL JAM 5	Paper did not depart from Sub-Tray Paper Exit PS.	5-22
E255	INSERTER PICK COUNT OVER	The insert pick count is over 15 sheets.	5-26
E259	CONFIGURATION ERROR	Finisher configuration is changed.	5-43
E260	FINISHER CPU ERROR	Slave processor cannot receive the status data from the Finisher processor.	5-26
E262	FINISHER INCORRECT COMMAND	Finisher received the command when its condition prohibits PR from issuing.	5-27
E264	FINISHER ACT TIMEOUT	Finisher does not become an activate condition.	5-27
E266	FINISHER DORMANT TIMEOUT	Finisher does not become a dormant condition.	5-27
E268	FINISHER BUSY TIMEOUT	The Busy signal of the Finisher is on more than specified time.	5-27
E26A	FINISHER ST EXIT SIGNAL ERROR	The Stacker exit signal is on more than specified time.	5-27
E26C	FINISHER PRINT TIMEOUT	The Print signal of the Finisher is on more than specified time.	5-27
E2B1	FNS COVER SHEET TRAY TIMEOUT	The table of the Cover Sheet Feeder is on more than the specified time.	5-28
E2C1	STAPLER POSITION ERROR	Abnormality was detected in the Staple Movement HP PS.	5-29
E2C2	STAPLING ERROR	Both staplers missed to staple.	5-30
E2C3	STAPLING F ERROR	Stapler (Front) missed to staple.	5-30
E2C4	STAPLING R ERROR	Stapler (Rear) missed to staple.	5-30
E2C5	STAPLER ROTATE ERROR 1	Abnormality was detected in the Staple Rotation HP PS. (slant)	5-31
E2C6	SHIFT TRAY TIMEOUT	The Main Tray was driven too long time.	5-32
E2C7	ALIGNMENT PLATE POSITION ERROR	Abnormality was detected in the Alignment Plate/Upper HP PS.	5-33
E2C8	SHIFT POSITION ERROR	Abnormality was detected in the Roller Shift HP PS.	5-34
E2C9	BELT POSITION ERROR	Abnormality was detected in the Paper Exit Belt HP PS.	5-35
E2CA	PAPER EXIT OPENING POSITION ERROR	Abnormality was detected in the Paper Exit Opening PS.	5-36
E2CB	STAPLER ROTATE ERROR 2	Abnormality was detected in the Stapler Rotation HP PS. (parallel)	5-36
E2E5	FNS DRIVER	Abnormality was detected in the Finisher driver.	5-37
E2E7	FNS CONVEYANCE MOTOR ERROR	FNS Conveyance Motor did not work correctly.	5-37
E2E8	FOLDING CONVEYANCE MOTOR ERROR	Folding Conveyance Motor did not work correctly.	5-37

Detail Error Code	Error Name	Description	Page No.
E2E9	ALIGNMENT PLATE/LOWER POSITION ERROR	Abnormality was detected in the Alignment Plate/Lower HP PS.	5-38
E2EA	STAPLER & FOLDING STOPPER MOTOR ERROR	An error occurred at the Staple & Folding Stopper Motor.	5-39
E2EB	FOLDING STOPPER ERROR	An error occurred at the Folding Stopper Motor.	5-40
E2EC	FOLDING KNIFE POSITION ERROR	An error occurred at the Folding Knife Motor.	5-41
E2ED	STAPLING & FOLDING STOPPER MOTOR ERROR	An error occurred at the Staple & Folding Stopper Motor.	5-42
E2EE	FNS SIGNAL TRANSLATION ERROR	A transfer error has occurred in the FNS P/K.	5-43

5.2.1. E008 FNS COVER SHEET TRAY EMPTY

PRIMARY FACTOR;	Detected that the No-Sheet PS is turned OFF(H) when the Cover Sheet Feeder is operating. Detected that the Sheet Set PS is OFF(H) and Pre no-paper PS is OFF(H) at the same time when the Cover Sheet Feeder starts.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The Cover Sheet Tray is empty.	Set: Paper	
2. This phenomenon occurs though the Cover Sheet Tray is not empty.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector. CN51-PS202	
	2. Sensor fault.	Replace: No-Sheet PS (PS202) Sheet Set PS (PS208) Pre no paper PS (PS209)	 3.4, 3-3 3.4, 3-3 3.4, 3-3
	3. PCB fault.	Replace:FS-108H/HBM P/K	3.5, 3-7

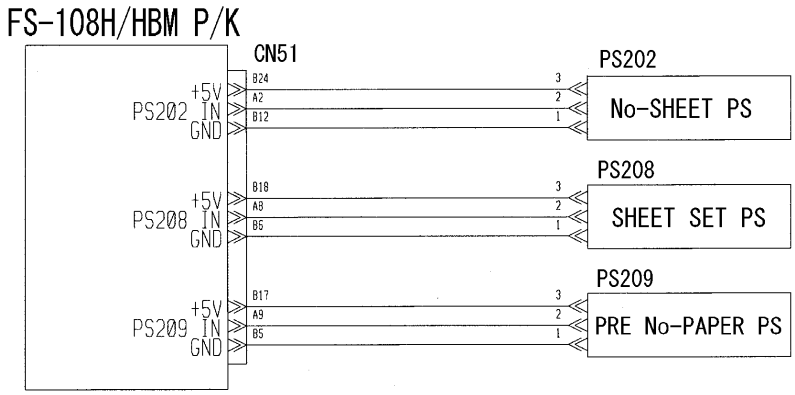


Figure 5-6. Error Code E008

5.2.2. E009 SHIFT TRAY FULL 1

PRIMARY FACTOR;	Detected that the Tray Lower Limit PS is turned ON (L).		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The Main Tray is full.	Remove: Paper	
2. Stacker full is detected though the Main Tray is not full of paper. (in case of the paper on the Main Tray is not abnormal)	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector. CN3 - PS3	
	2. Sensor fault.	Replace: Tray Lower Limit PS (PS3)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-7			

5.2.3. E00A SHIFT TRAY FULL 2

PRIMARY FACTOR;	Detected that the stacked paper on the Main Tray is abnormal.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. Occurred that the stacked paper on the Main Tray is abnormal.	Remove: Paper	
2. Stacker full is detected though the Main Tray is not full of paper. (in case of the paper on the Main Tray is not abnormal)	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector. CN3 - PS2 CN3 - PS7	
	2. Sensor fault.	Replace: Tray Lower Limit PS (PS3)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

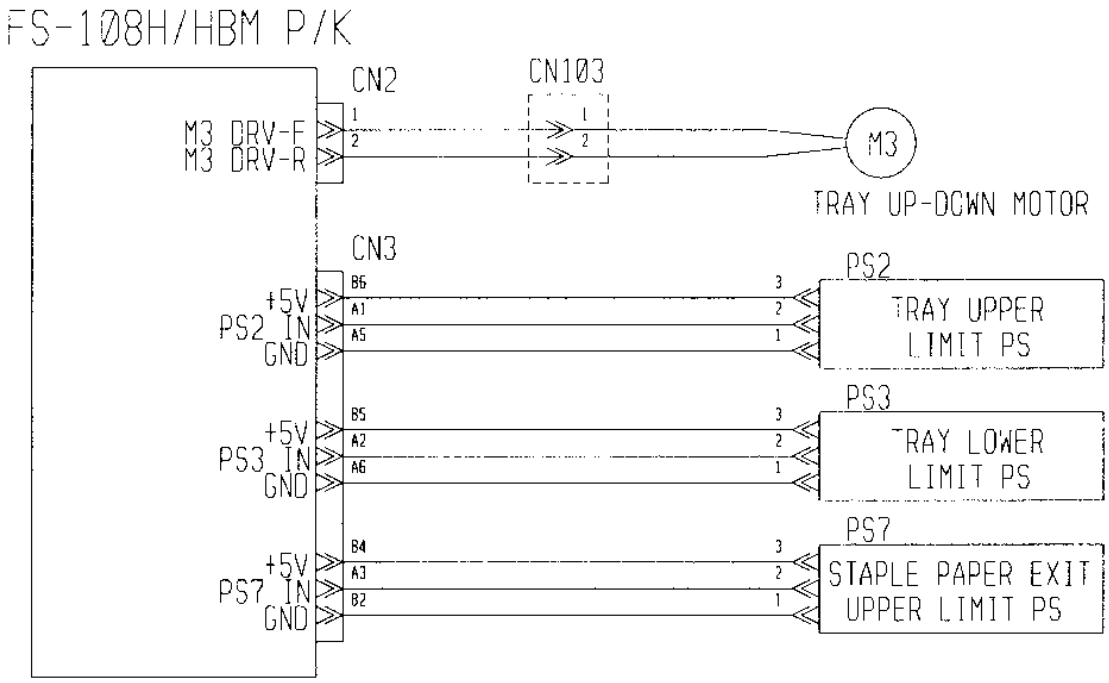


Figure 5-7. Error Codes E009, E00A & E2C6

5.2.4. E00D SUB TRAY FULL

PRIMARY FACTOR;	Detected that the Sub Tray Full PS is turn ON (H).		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The Sub-Tray is full.	Remove: Paper	
2. Stacker full is detected though the Sub-Tray is not full of paper.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS36	
	2. Sensor fault.	Replace: Sub-Tray Full PS (PS36)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

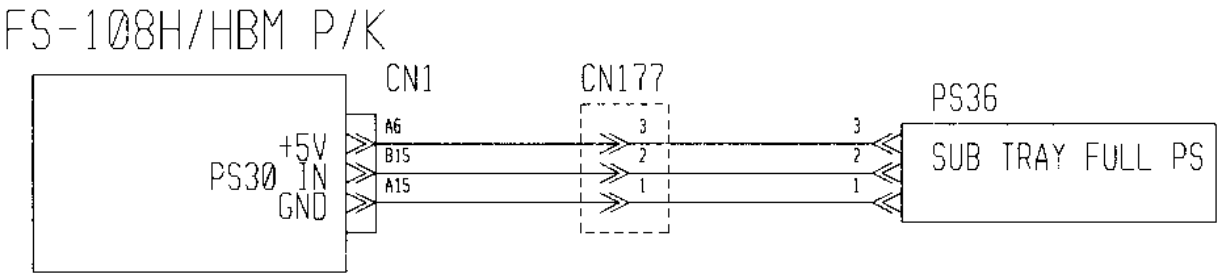


Figure 5-8. Error Code E00D

5.2.5. E019 LOW STAPLE (R)
E01A LOW STAPLE (F)

PRIMARY FACTOR;	E019: Lack of Rear Side Staple E01A: Lack of Front Side Staple		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs due to a lack of staples. (the number of staples is less than 50)	1. Lack of Staples.	Supply the Staple.	
2. This phenomenon occurs though the staple plates are in the Staple Cartridge. (more than 50 staples)	1. The Staple Cartridge housing is incorrectly set.	Reset the Staple Cartridge housing correctly.	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN24 - M22 CN28 - M24	
	3. Staple Detection Sw in Stapler is fault	Replace: Stapler Motor R (M22) Stapler Motor F (M24)	 3.5, 3-7 3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

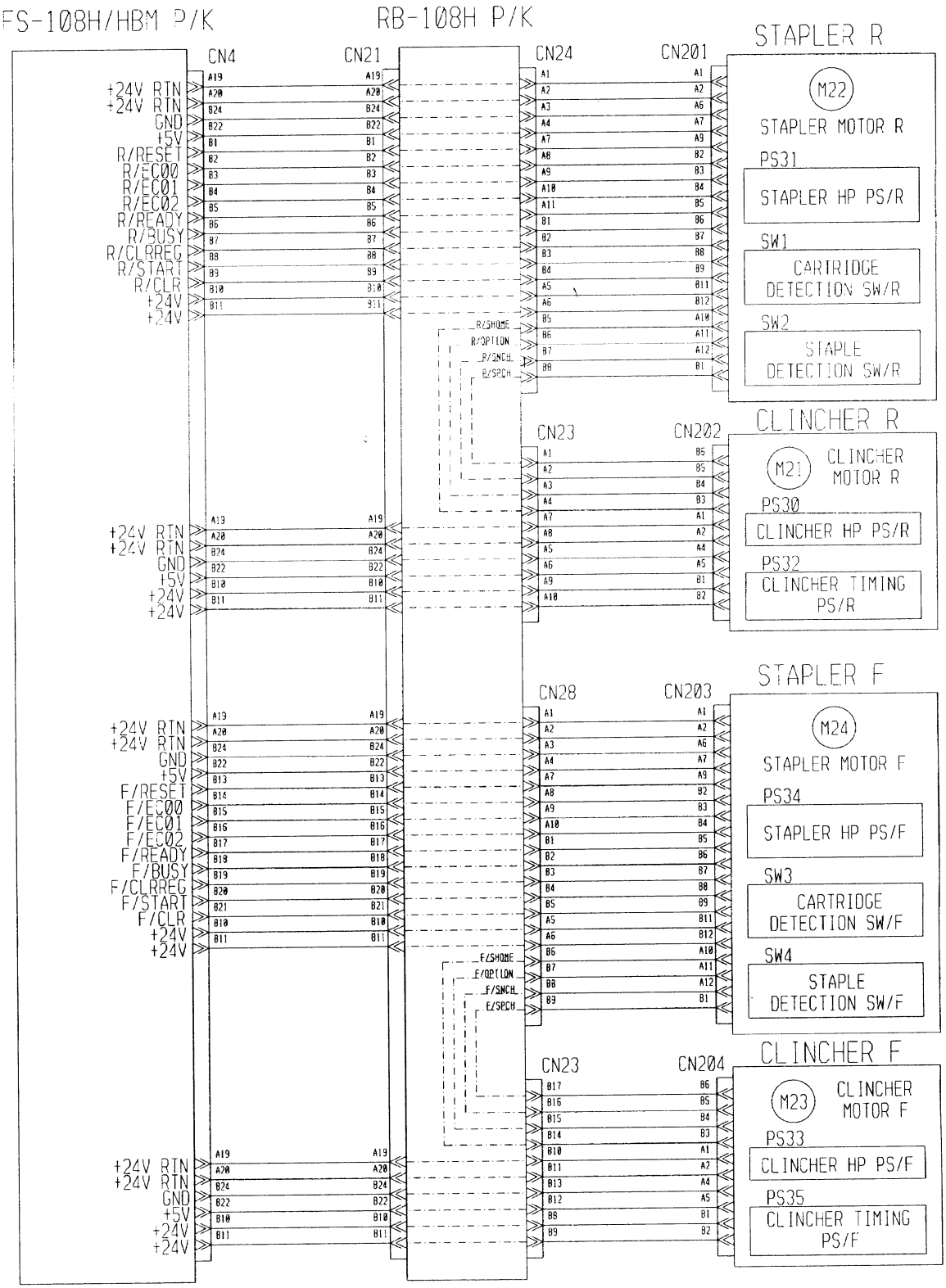


Figure 5-9. Error Codes E019 , E01A & E2C2 to E2C4

5.2.6. E027 STACKER 4 TABLE FULL

PRIMARY FACTOR;	Detected that the Folding Full Up PS is turn ON (H).		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The Booklet Tray is full.	Remove: Paper	
2. Stacker full is detected though the Booklet Tray is not full of paper.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - PS29	
	2. Sensor fault.	Replace: Folding Full Up PS (PS29)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

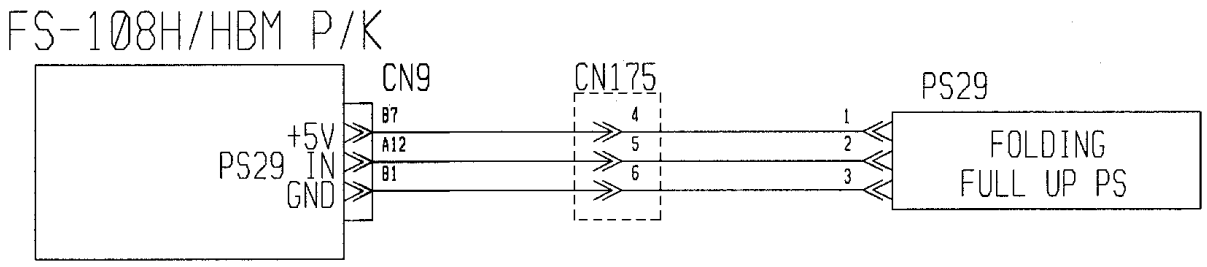


Figure 5-10. Error Code E027

5.2.7. E03E FNS TOP COVER OPEN
E03F FNS FRONT COVER OPEN

PRIMARY FACTOR;	E03E: Top Cover of finisher is open. E03F: Front Cover of finisher is open.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Cover is open.	1. Cover is open.	Close the cover.	
2. This phenomenon occurs though the Cover does not open.	1. Switch or sensor fault.	Replace: Interlock (MS1) Paper Exit Cover Open/Close Detection PS (PS207)	 3.4, 3-3 3.4, 3-3
	2. The mounting of the switch or sensor is faulty.	Reset: Interlock (MS1) Paper Exit Cover Open/Close Detection PS (PS207)	 3.4, 3-3 3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector. CN6 - MS1 CN1 - PS207	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

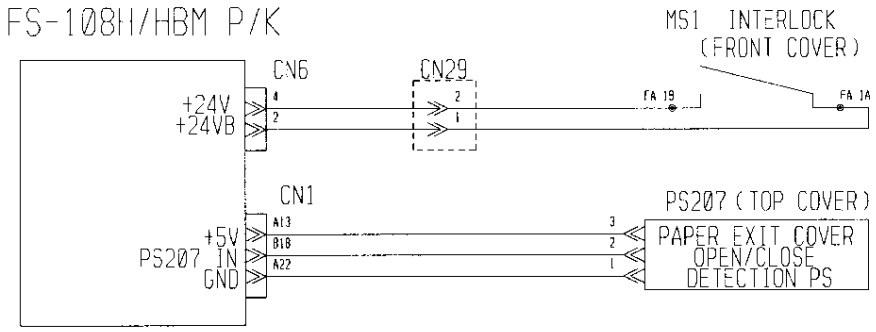


Figure 5-11. Error Code E03E, E03F

5.2.8. E064 to E068 PAPER ON PAPER PATH 14 to 18
E069 to E06C PAPER ON PAPER PATH 30 to 33

PRIMARY FACTOR;	Detected that sensor of each sensor unit is turn ON. This status is generally detected when paper is in the finisher. **Note:** When the center stapling/folding mode is canceled, the paper remains in the Stacker unit and E067 is reported.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. Paper jam occurs.	Remove: Jammed Paper	
2. The Sensor detected the paper jam though a paper jam does not occur.	1. Foreign substances are in the Paper Path.	Remove: Foreign substances	
	2. The mounting of the Sensor is faulty.	Reset the Sensor correctly.	
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector. (see the table)	
	4. Sensor fault.	Replace: Sensor (see the table)	3.4, 3-3
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

Item	Error Code	Sensor to be specified			Maint. Ref. + Page
		Sensor Name	Connector No.	Sensor Description	
(1)	E064	PS4	CN1	FIN Entrance Passage PS	3.4, 3-3
(2)	E065	PS6	CN1	Paper Exit 1 PS	3.4, 3-3
		PS10	CN1	Paper Exit 2 PS	3.4, 3-3
(3)	E066	PS5	CN1	Stacker Conveyance Passage PS	3.4, 3-3
(4)	E067	PS20	CN25	Stacker No-Paper Detection PS	3.4, 3-3
(5)	E068	PS1	CN1	Sub-Tray Paper Exit PS	3.4, 3-3
(6)	E069	PS26	CN9	Folding Passage PS/2	3.4, 3-3
(7)	E06A	PS28	CN9	Folding Passage PS/1	3.4, 3-3
(8)	E06B	PS25	CN9	Folding Paper Exit PS/2	3.4, 3-3
(9)	E06C	PS201	CN51	Sheet Passage PS	3.4, 3-3

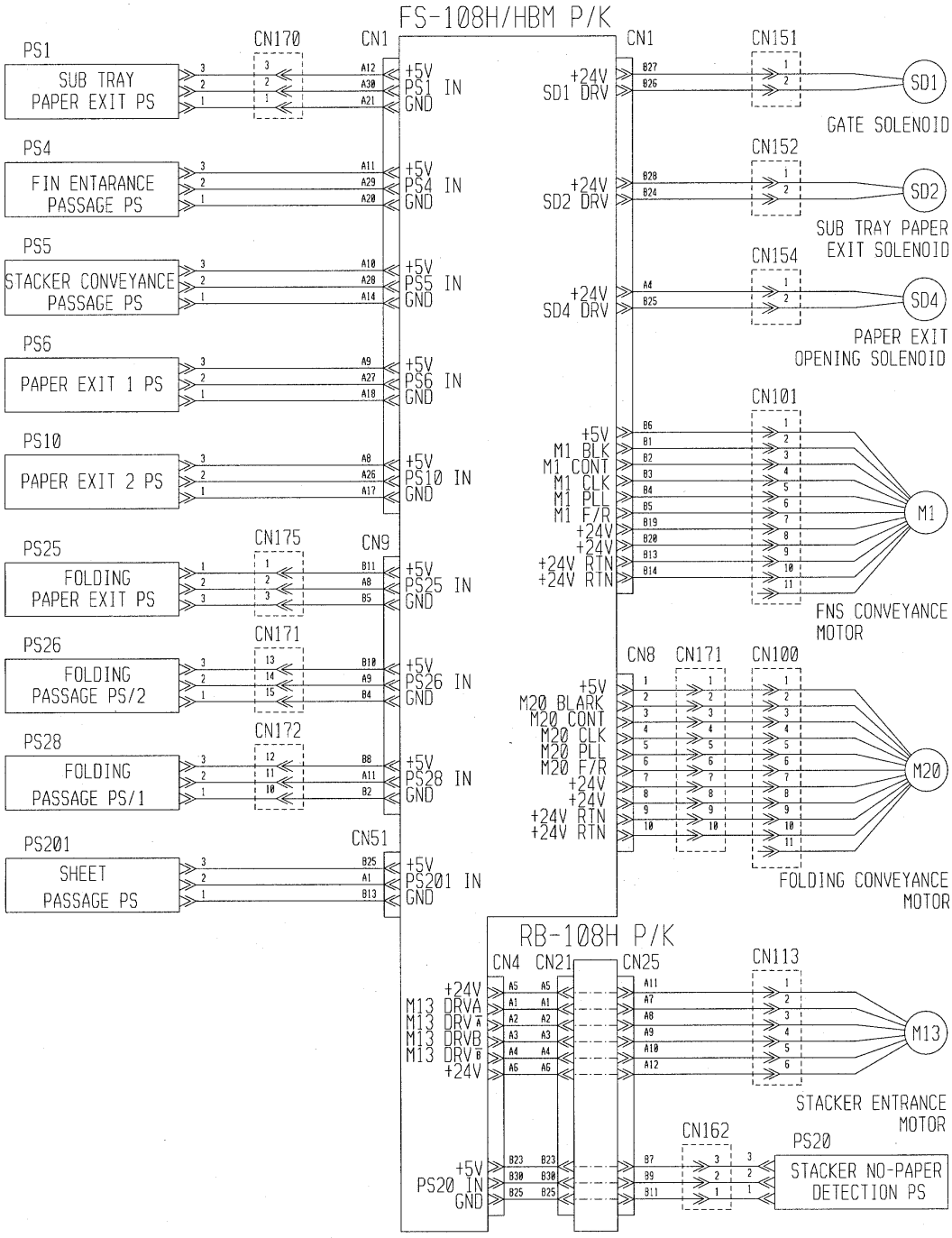


Figure 5-12. Error Codes E064 to E06C, E1C3 to E1C9, E1D0 to E1D3, E1D5 to E1D9, E2E7 & E2E8

5.2.9. E1C3 FNS LEAD JAM 6

PRIMARY FACTOR;	Paper did not arrive at the Folding Passage PS/1 in the Folding Mode.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Folding Passage PS/1.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Folding Passage PS/1.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - PS28	
	2. Sensor fault.	Replace: Folding Passage PS/1 (PS28)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.10. E1C4 FNS LEAD JAM 7

PRIMARY FACTOR;	Paper did not arrive at the Folding Paper Exit PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Folding Paper Exit PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Folding Paper Exit PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - PS25	
	2. Sensor fault.	Replace: Folding Paper Exit PS (PS25)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.11. E1C5 FNS LEAD JAM 8

PRIMARY FACTOR;	Paper did not arrive at the Folding Passage PS/2.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Folding Passage PS/2.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Folding Passage PS/2.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - PS26	
	2. Sensor fault.	Replace: Folding Passage PS/2 (PS26)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.12. E1C6 FNS TRAIL JAM 7

PRIMARY FACTOR;	Paper did not depart from the Folding Paper Exit PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not depart from the Folding Paper Exit PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN8 - M20	
	3. Motor fault.	Replace: Folding Conveyance Motor (M20)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.13. E1C7 FNS INSERTER JAM 1

PRIMARY FACTOR;	Paper did not arrive at the Sheet Passage PS in the Cover Sheet Feeder use.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Sheet Passage PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Sheet Passage PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN51 - PS201	
	2. Sensor fault.	Replace: Sheet Passage PS (PS201)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.14. E1C8 FNS INSERTER JAM 2

PRIMARY FACTOR;	Paper did not arrive at the Stacker Conveyance Passage PS in the Cover Sheet Feeder use.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Stacker Conveyance Passage PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the gate.	Position adjustment: Sub-Tray Paper Exit Gate Paper Path Switching Gate	6.3.3, 6-33 6.3.4, 6-35
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - SD1	
	4. Solenoid fault.	Replace: Gate Solenoid (SD1)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Stacker Conveyance Passage PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS5	
	2. Sensor fault.	Replace: Stacker Conveyance Passage PS (PS5)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.15. E1C9 FNS INSERTER JAM 3

PRIMARY FACTOR;	Paper did not arrive at the Paper Exit 2 PS in the Cover Sheet Feeder use.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Paper Exit 2 PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the gate.	Position adjustment: Sub-Tray Paper Exit Gate Paper Path Switching Gate	6.3.3, 6-33 6.3.4, 6-35
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Paper Exit 2 PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS10	
	2. Sensor fault.	Replace: Paper Exit 2 PS (PS10)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.16. E1D0 FNS LEAD JAM 1

PRIMARY FACTOR;	Paper did not arrive at the FIN Entrance Passage PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the FIN Entrance Passage PS.	1. Foreign substance is on the paper path between Engine and Finisher.	Remove: Foreign substance	
	2. Paper guide of finisher entrance is dislocated.	Check: Position of paper guide. Paper guide is changing.	
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - M1	
	4. Motor fault.	Replace: FNS Conveyance Motor (M1)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the FIN Entrance Passage PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS4	
	2. Sensor fault.	Replace: FIN Entrance PS (PS4)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.17. E1D1 FNS LEAD JAM 2

PRIMARY FACTOR;	Paper did not arrive at the Paper Exit 2 Sensor.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Paper Exit 2 PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the gate.	Position adjustment: Sub-Tray Paper Exit Gate Paper Path Switching Gate	6.3.3, 6-33 6.3.4, 6-35
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Paper Exit 2 PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS10	
	2. Sensor fault.	Replace: Paper Exit 2 PS (PS10)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.18. E1D2 FNS LEAD JAM 3

PRIMARY FACTOR;	Paper did not arrive at the Stacker Conveyance Passage PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Stacker Conveyance Passage PS	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the gate.	Position adjustment: Sub-Tray Paper Exit Gate Paper Path Switching Gate	6.3.3, 6-33 6.3.4, 6-35
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - SD1	
	4. Solenoid fault.	Replace: Gate Solenoid (SD1)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the paper has arrive at the Stacker Conveyance Passage PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS5	
	2. Sensor fault.	Replace: Stacker Conveyance Passage PS (PS5)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.19. E1D3 FNS LEAD JAM 4

PRIMARY FACTOR;	Paper did not arrive at the Paper Exit 1 PS.		
Note ; E1D3 is detected on Staple Mode of the following paper. Letter (LEF), A4 (LEF), B5 (LEF)			
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Paper Exit 1 PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
2. This phenomenon occurs though the paper has arrive at the Paper Exit 1 PS.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS6	
	2. Sensor fault.	Replace: Paper Exit 1 PS (PS6)	3.4, 3-3
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
	4. Shift Pulley fault.	Replace: Shift Pulley	6.2.1, 6-11
Refer to Figure 5-12			

5.2.20. E1D5 FNS TRAIL JAM 2

PRIMARY FACTOR;	Paper did not depart from the Paper Exit 2 PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not depart from the Paper Exit 2 PS.	1. Solenoid operation fault.	Adjustment: Paper Exit Opening Solenoid (SD4)	6.3.8, 6-40
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - SD4	
	3. Solenoid fault.	Replace: Paper Exit Opening Solenoid (SD4)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.21. E1D6 FNS TRAIL JAM 3

PRIMARY FACTOR;	Paper did not depart from the Stacker Conveyance Passage PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not depart from the Stacker Conveyance Passage PS.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the By-Pass Gate.	Position adjustment: By-Pass Gate.	6.3.5, 6-37
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - M13	
	4. Motor fault.	Replace: Stacker Entrance Motor (M13)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
	6. Shift Pulley fault.	Replace: Shift Pulley	6.2.1, 6-11
Refer to Figure 5-12			

5.2.22. E1D7 FNS TRAIL JAM 4

PRIMARY FACTOR;	Paper did not depart from the Paper Exit 1 PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not depart from the Paper Exit 1 PS.	1. Paper Exit Arm position fault.	Position adjustment: Paper Exit Arm.	6.3.11, 6-45
	2. Paper Exit operation fault	Adjustment: Opening/Closing at the Paper Exit Paper Exit Opening Solenoid (SD4) Paper Exit Opening Lower Guide Plate	6.3.7, 6-39 6.3.8, 6-40 6.3.9, 6-42
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - SD4	
	4. Solenoid fault.	Replace: Paper Exit Opening solenoid (SD4)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.23. E1D8 FNS LEAD JAM 5
E1D9 FNS TRAIL JAM 5

PRIMARY FACTOR;	Non-Staple Mode and job of paper exit on the Sub-tray E1D8 : Paper did not arrive at the Sub-Tray Paper Exit PS. E1D9 : Paper did not depart from the Sub-Tray Paper Exit PS.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the paper has not arrive the Sub-Tray Paper Exit PS. (E1D8)	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. Paper contacts the Gate.	Position adjustment: Sub-Tray Paper Exit Gate.	6.3.4, 6-35
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - SD2	
	4. Solenoid fault.	Replace: Sub-Tray Paper Exit Solenoid (SD2)	3.5, 3-7
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. Paper has arrive at the Sub-Tray Paper Exit Sensor.	1. Foreign substance is on the paper path.	Remove: Foreign substance	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS1	
	3. Sensor fault.	Replace: Sub-Tray Paper Exit PS (PS1)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12			

5.2.24. E255 INSERTER PICK COUNT OVER

PRIMARY FACTOR;	The pick count is over 15 sheets.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
	2. PCB fault.	Replace: CPXXX Assembly	Refer to maintenance manual of Engine.

5.2.25. E260 FINISHER CPU ERROR
E26A FINISHER ST EXIT SIGNAL ERROR

PRIMARY FACTOR;	E260: Engine cannot communicate with Finisher. E26A: Finisher detected the abnormality of Paper Exit Signal (ST_EXIT Signal) from Engine.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. The breaking of Interface cables or the disconnecting of connectors.	Repair the cable or reset the connector CN7 - P745 (CPXXX Assembly)	
	2. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
	3. PCB fault.	Replace: CPXXX Assembly	Refer to maintenance manual of Engine.

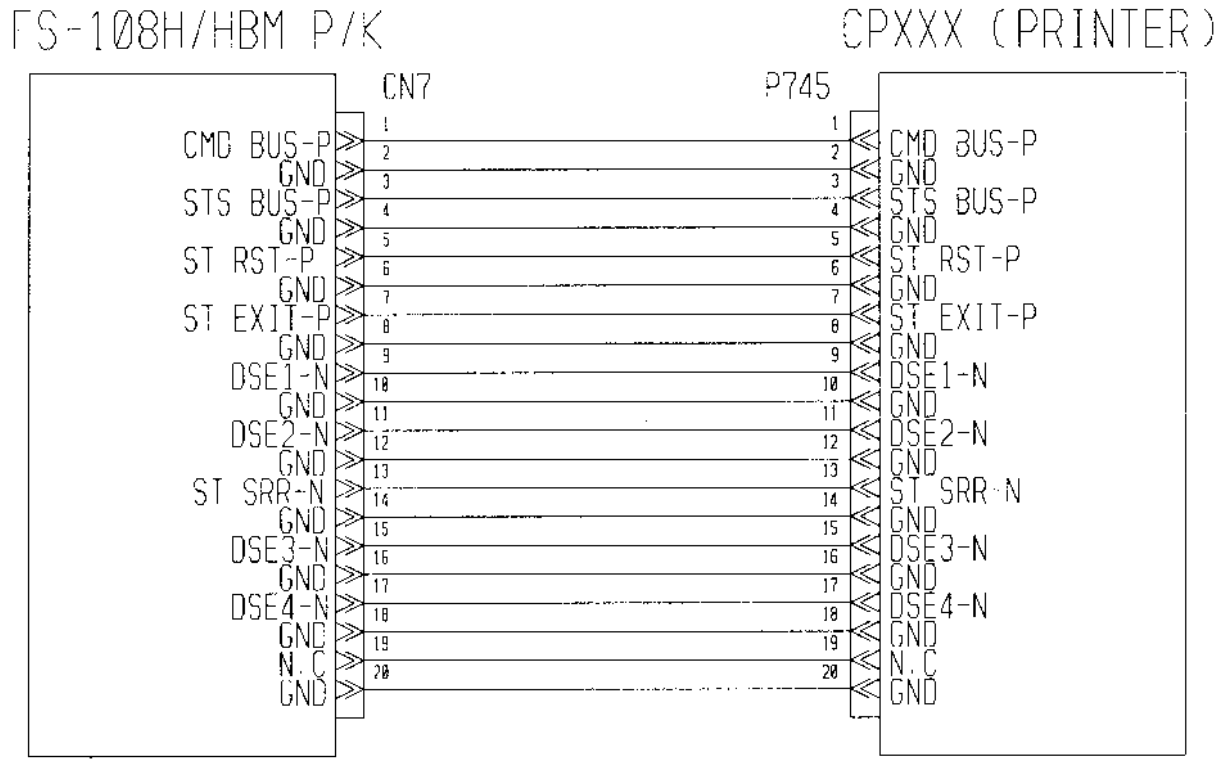


Figure 5-13. Error Codes E260, E26A

5.2.26. E262 FINISHER INCORRECT COMMAND
E264 FINISHER ACT TIMEOUT
E266 FINISHER DORMANT TIMEOUT
E268 FINISHER BUSY TIMEOUT
E26C FINISHER PRINT TIMEOUT

PRIMARY FACTOR;	E262: The Finisher detected that it received a command on undefined condition. E264: The Finisher does not become an activate condition. E266: The Finisher does not become a dormant condition. E268: The Finisher is in busy condition continuously. E26C: The Finisher is in print condition continuously.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

5.2.27. E2B1 FNS COVER SHEET TRAY TIMEOUT

PRIMARY FACTOR;	Even if the Cover Sheet Tray is driven for 10 seconds, the Sheet Tray Upper Limit PS or Sheet Tray Lower Limit PS does not detect the Tray.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. Cover Sheet Tray does not operate.	1. The breaking of Interface cables or the disconnecting of connectors.	Repair the cable or reset the connector CN2 (PI-108H P/K) - M201	
	2. Motor fault.	Replace: Sheet Tray Motor (M201)	3.5, 3-7
	3. PCB fault.	Replace: PI-108H P/K FS-108H/HBM P/K	3.5, 3-7 3.5, 3-7
2. This phenomenon occurs though the Cover Sheet Tray operates.	1. Sensor is incorrectly set.	Reset the Sensor correctly. Sheet Tray Upper Limit PS (PS204) Sheet Tray Lower Limit PS (PS203)	 3.4, 3-3 3.4, 3-3
	2. The breaking of Interface cables or the disconnecting of connectors.	Repair the cable or reset the connector CN51 - PS203 CN51 - PS204	
	3. Sensor fault.	Replace: Sheet Tray Upper Limit PS (PS204) Sheet Tray Lower Limit PS (PS203)	 3.4, 3-3 3.4, 3-3
	4. PCB fault.	Replace: PI-108H P/K FS-108H/HBM P/K	3.5, 3-7 3.5, 3-7

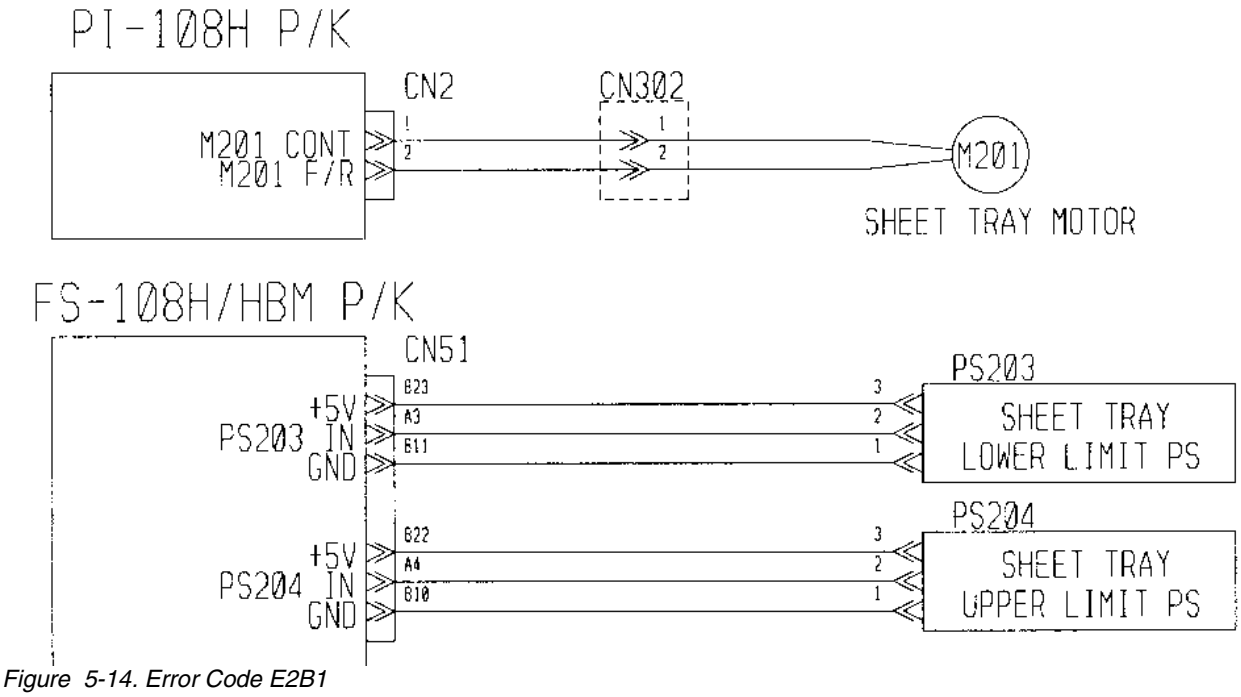


Figure 5-14. Error Code E2B1

5.2.28. E2C1 STAPLER POS. ERROR

PRIMARY FACTOR;	During the Stapler Unit movement, the Staple horizontal position cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Stapler Unit does not move normally.	1. The drive system for the Stapler Unit is faulty.	Check: Stapler Unit or its environs.	
	2. Motor fault.	Replace: Stapler Movement Motor (M11)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN23 - M11	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Stapler Unit operates.	1. The mounting of the sensor is faulty.	Reset: Stapler Movement HP PS (PS11)	3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - PS11	
	3. Sensor fault.	Replace: Stapler Movement HP PS (PS11)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

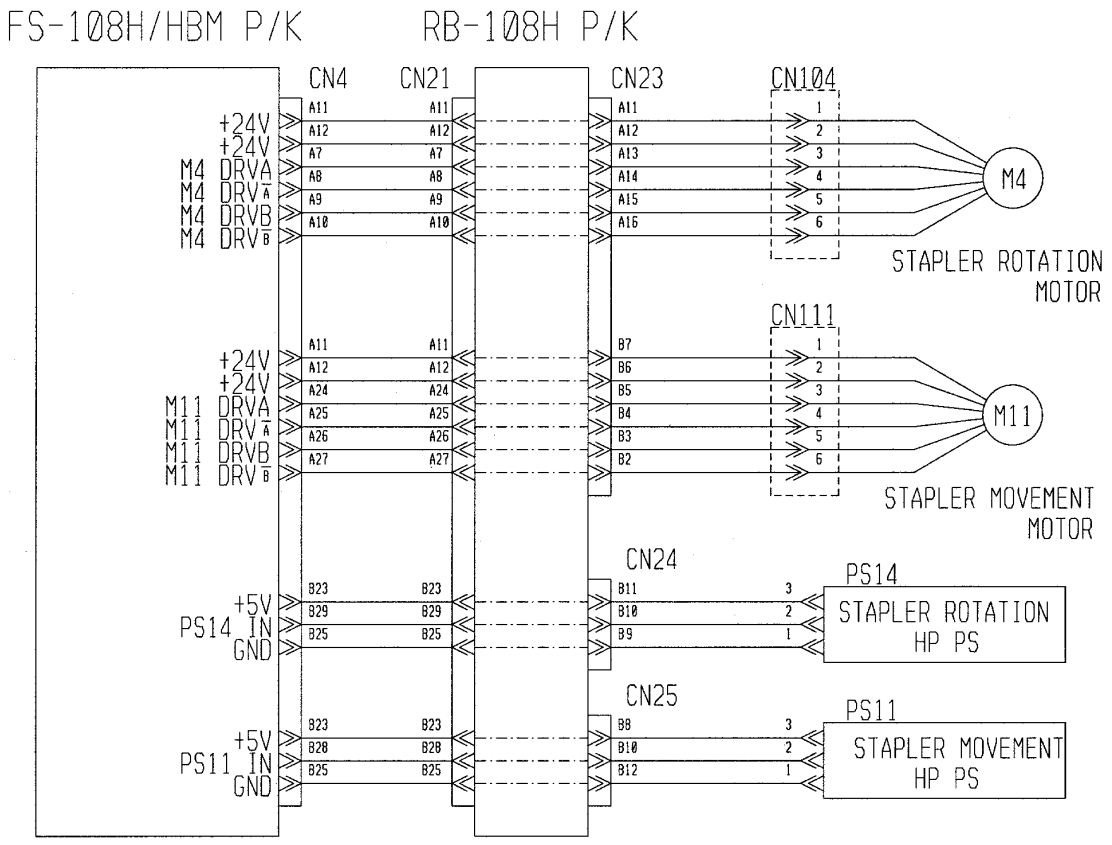


Figure 5-15. Error Code E2C1, E2C5 & E2CB

5.2.29. E2C2 STAPLING ERROR
E2C3 STAPLING F ERROR
E2C4 STAPLING R ERROR

PRIMARY FACTOR;	E2C2: When in Staple operation, both Staple operations fail. E2C3: When in Staple operation, the Front side Staple operation fails. E2C4: When in Staple operation, the Rear side Staple operation fails. (Front side staple: Stapler Unit F, rear side staple: Stapler Unit R)		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Stapler Unit does not operate.	1. The staples got blocked in Stapler.	Remove: staple	
	2. Stapler Unit fault.	Replace: Stapler Unit R (M21,M22) Stapler Unit F (M23,M24)	 3.5, 3-7 3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector Rear: CN23 - M21 Rear: CN24 - M22 Front: CN23 - M23 Front: CN28 - M24	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Stapler Unit operates during stapling.	1. Sensor in the Stapler Unit fault.	Replace: Stapler Unit R (M21,M22) Stapler Unit F (M23,M24)	 3.5, 3-7 3.5, 3-7
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector Rear: CN23 - M21 Rear: CN24 - M22 Front: CN23 - M23 Front: CN28 - M24	
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-9.			

5.2.30. E2C5 STAPLER ROTATE ERROR 1
E2CB STAPLER ROTATE ERROR 2

PRIMARY FACTOR;	During the Stapler Unit rotation, the Stapler Unit rotation position cannot be detected. E2C5: slant position, E2CB: parallel position.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Stapler Unit does not rotate.	1. The drive system for the Stapler Unit rotation is faulty.	Check: Stapler Unit or its environs.	
	2. Motor fault.	Replace: Stapler Rotation Motor (M4)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN23 - M4	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Stapler Unit rotate.	1. The mounting of the sensor is faulty.	Reset the sensor correctly Stapler Rotation HP PS (PS14)	3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN24 - PS14	
	3. Sensor fault.	Replace: Stapler Rotation HP PS (PS14)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-15.			

5.2.31. E2C6 SHIFT TRAY TIMEOUT

PRIMARY FACTOR;	Even if the Main Tray is driven for 10 seconds, the Tray Upper Limit PS or Tray Lower Limit PS does not detect the Tray.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Main Tray does not operate.	1. The system for the Main Tray is faulty. The Up-down wire is worn out.	Replace: Up-down wire	6.2.5, 6-21
	2. Motor fault.	Replace: Tray Up-Down Motor (M3)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN2 - M3	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Main Tray operates.	1. The mounting sensor is faulty.	Reset the sensor correctly. Tray Lower Limit PS (PS3) Staple Paper Exit Upper Limit PS (PS7)	 3.4, 3-3 3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN3 - PS2 CN3 - PS3	
	3. Sensor fault.	Replace: Tray Lower Limit PS (PS3) Staple Paper Exit Upper Limit PS (PS7)	 3.4, 3-3 3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-7.			

5.2.32. E2C7 ALIGNMENT PLATE POS. ERROR

PRIMARY FACTOR;	During the Alignment Plate/Upper operation, the plate cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Alignment Plate/Upper does not operate.	1. The drive system for the Alignment Plate/Upper is faulty.	Check: Alignment Plate/Upper or its environs.	6.3.12, 6-46
	2. Motor fault.	Replace: Alignment Plate/Upper Motor (M5)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - M5	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Alignment Plate/Upper operates.	1. The mounting sensor is faulty.	Reset the Sensor correctly. Alignment Plate/Upper HP PS (PS8)	3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - PS8	
	3. Sensor fault.	Replace: Alignment Plate/Upper HP PS (PS8)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

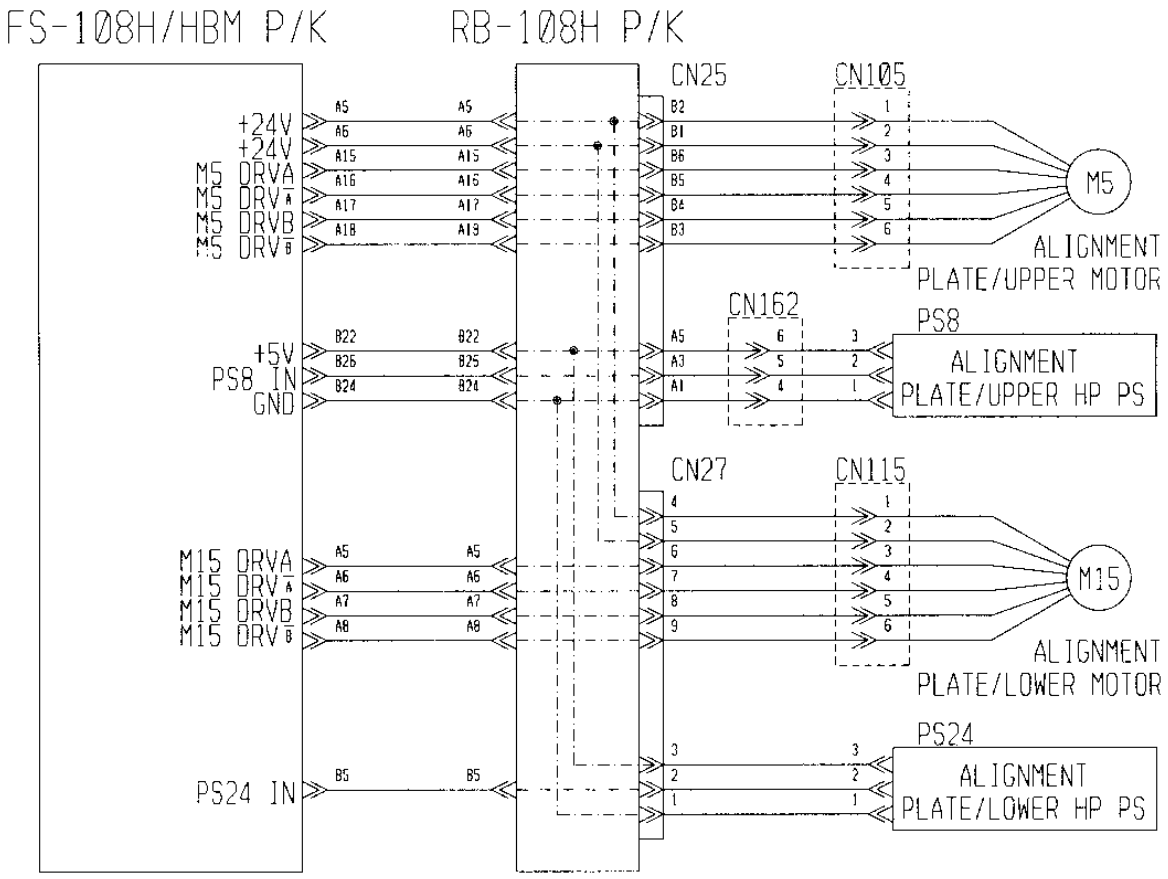


Figure 5-16. Error Codes E2C7 & E2E9

5.2.33. E2C8 SHIFT POS. ERROR

PRIMARY FACTOR;	During the Shift operation, the Shift Unit cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Shift Unit does not operate.	1. The drive system for the Shift is faulty.	Adjust: Shift position Check: Shift or its environs.	6.2.1, 6-11
	2. Motor fault.	Replace: Roller Shift Motor (M2)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - M2	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
	5. Shift Pulley fault.	Replace: Shift Pulley	6.2.1, 6-11
2. This phenomenon occurs though the Shift Unit operates.	1. The mounting sensor is faulty.	Reset the Sensor correctly. Roller Shift HP PS (PS18)	3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS18	
	3. Sensor fault.	Replace: Roller Shift HP PS (PS18)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

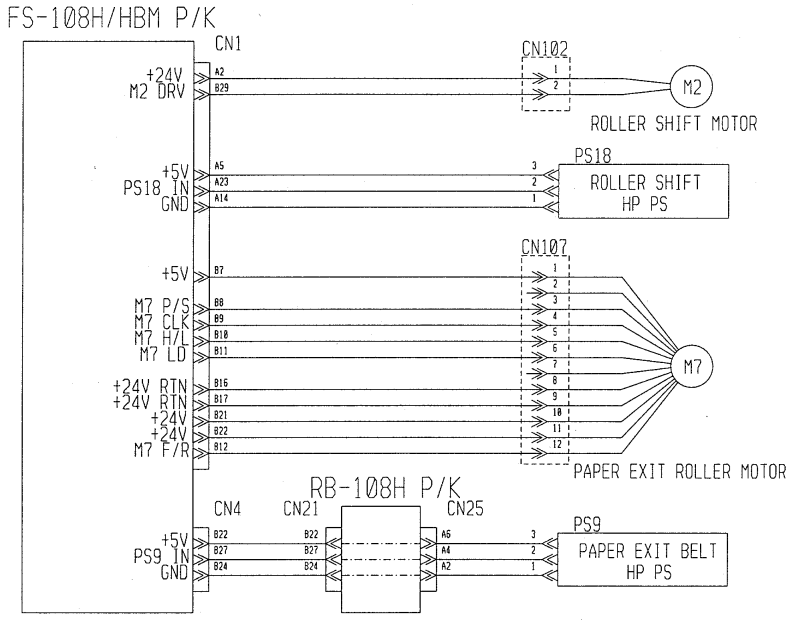


Figure 5-17. Error Codes E2C8 & E2C9

5.2.34. E2C9 BELT POS. ERROR

PRIMARY FACTOR;	During the Paper Exit Belt operation, the Belt cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Paper Exit Belt does not operate.	1. The drive system for the belt operation is faulty.	Check: Paper Exit Belt or its environs.	
	2. Motor fault.	Replace: Paper Exit Roller Motor (M7)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - M7	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Paper Exit Belt operates.	1. The mounting sensor is faulty.	Reset the Sensor correctly. Paper Exit Belt HP PS (PS9)	3.4, 3-3
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - PS9	
	3. Sensor fault.	Replace: Paper Exit Belt HP PS (PS9)	3.4, 3-3
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-17.			

5.2.35. E2CA PAPER EXIT OPENING POS. ERROR

PRIMARY FACTOR;	During the Paper Exit Opening operation, the Opening cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Paper Exit Opening does not operate.	1. The drive system for the Paper Exit Opening operation is faulty.	Check: Paper Exit Opening or its environs.	
	2. Motor fault.	Replace: Paper Exit Opening Motor (M8)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - M8	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Paper Exit Opening operates.	1. The mounting sensor is faulty.	Reset the Sensor correctly. Paper Exit Opening PS (PS12)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - PS12	
	4. Sensor fault.	Replace: Paper Exit Opening PS (PS12)	3.4, 3-3
	5. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

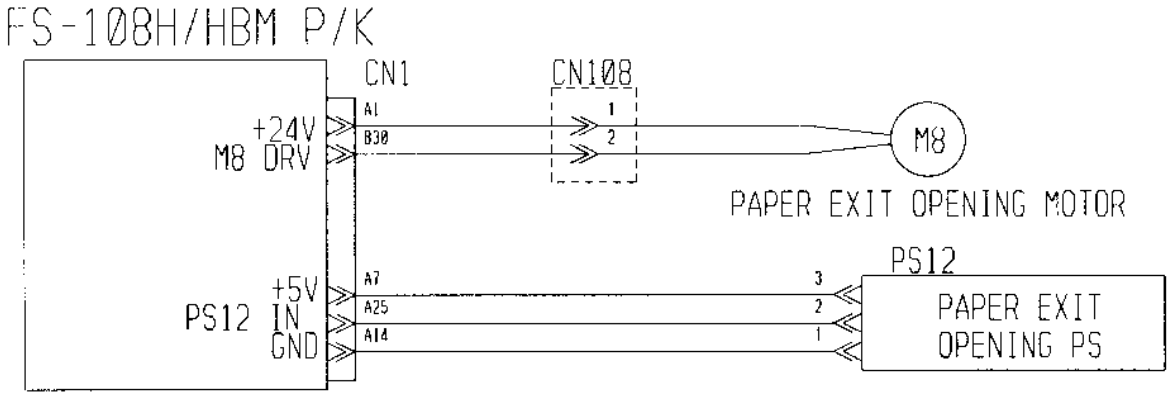


Figure 5-18. Error Code E2CA

5.2.36. E2E5 FNS DRIVER

PRIMARY FACTOR;	Detected that the power supply does not supply the Finisher with +24V power.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. Supply voltage fault.	Check: Supply voltage	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN6 - P231	
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

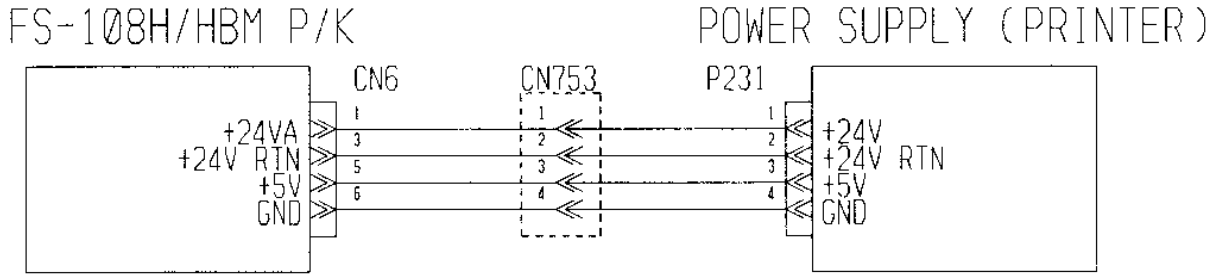


Figure 5-19. Error Code E2E5

5.2.37. E2E7 FNS CONVEYANCE MOTOR ERROR

PRIMARY FACTOR;	Abnormalities occurred in operation of the FNS Conveyance Motor.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the FNS Conveyance Motor does not operate.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN1 - M1	
	2. Motor fault.	Replace: FNS Conveyance Motor (M1)	3.5, 3-7
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12.			

5.2.38. E2E8 FOLDING CONVEYANCE MOTOR ERROR

PRIMARY FACTOR;	Abnormalities occurred in operation of the Folding Conveyance Motor.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Folding Conveyance Motor does not operate.	1. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN8 - M20	
	2. Motor fault.	Replace: Folding Conveyance Motor (M20)	3.5, 3-7
	3. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-12.			

5.2.39. E2E9 ALIGNMENT PLATE/LOWER POS. ERROR

PRIMARY FACTOR;	During the Alignment Plate/Lower operation, the plate cannot be detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Alignment Plate/Lower does not operate.	1. The drive system for the Alignment Plate/Upper is faulty.	Check: Alignment Plate/Lower or its environs.	
	2. Motor fault.	Replace: Alignment Plate/Lower Motor (M15)	3.5, 3-7
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN27 - M15	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Alignment Plate/Lower operates.	1. The mounting sensor is faulty.	Reset the Sensor correctly. Alignment Plate/Lower HP PS (PS24)	3.4, 3-3
	2. Sensor fault.	Replace: Alignment Plate/Lower HP PS (PS24)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN27 - PS24	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-16.			

5.2.40. E2EA STOPPER RELEASE MOTOR ERROR

PRIMARY FACTOR;	During the Stapling & Folding Stopper operation, the Stopper cannot detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Stapling & Folding Stopper does not operate.	1. The drive system for the Stapling & Folding Stopper is faulty.	Check: Stapling & Folding Stopper or its environs.	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN26 - M17	
	3. Motor fault.	Replace: Stapling & Folding Stopper Release Motor (M17)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Stapling & Folding Stopper operates.	1. The mounting of the sensor is faulty.	Reset the Sensor correctly. Stapling & Folding Stopper Release Motor HP PS (PS21)	3.4, 3-3
	2. Sensor fault.	Replace: Stapling & Folding Stopper Release Motor HP PS (PS21)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN26 - PS21	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

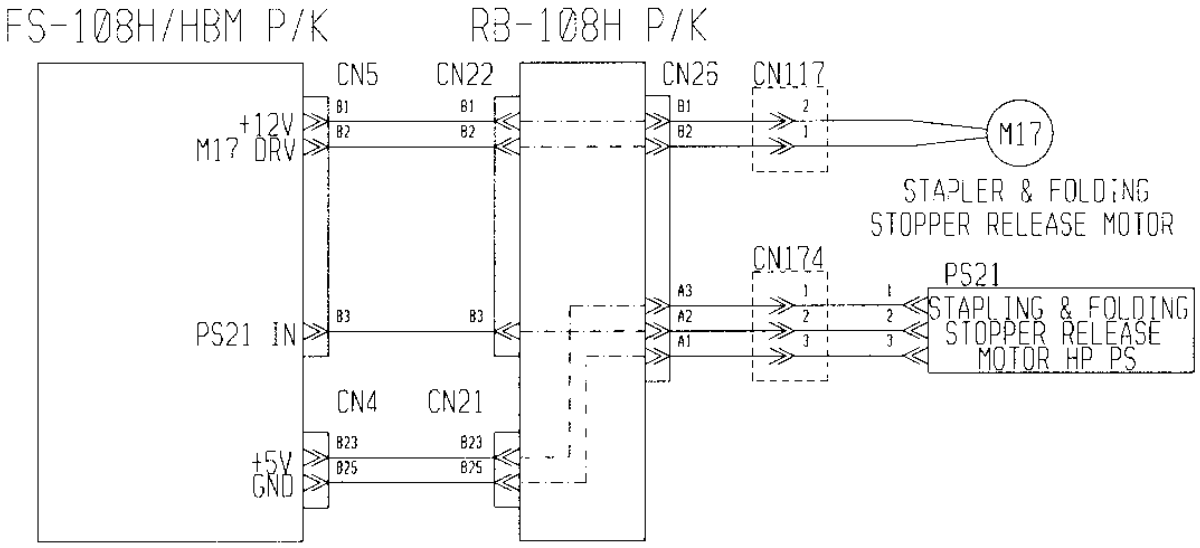


Figure 5-20. Error Code E2EA

5.2.41. E2EB FOLDING STOPPER ERROR

PRIMARY FACTOR;	During the Folding Stopper operation, the stopper cannot detected.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Folding Stopper does not operate.	1. The drive system for the Folding Stopper is faulty.	Check: Folding Stopper or its environs.	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - M18	
	3. Motor fault.	Replace: Folding Stopper Motor (M18)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Folding Stopper operates.	1. The mounting of the sensor is faulty.	Reset the Sensor correctly. Folding Stopper HP PS (PS27)	3.4, 3-3
	2. Sensor fault.	Replace: Folding Stopper HP PS (PS27)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN9 - PS27	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
Refer to Figure 5-21.			

5.2.42. E2EC FOLDING KNIFE POS. ERROR

PRIMARY FACTOR;	During of the Folding Knife operation, the Folding Knife HP PS continues being ON (L) or does not turn on (L).		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Folding Knife does not operate.	1. The drive system for the Folding Knife is faulty.	Check: Folding Knife or its environs.	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN8 - M19	
	3. Motor fault.	Replace: Folding Knife Motor (M19)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Folding Knife operates.	1. The mounting of the sensor is faulty.	Reset the Sensor correctly. Folding Knife HP PS (PS22)	3.4, 3-3
	2. Sensor fault.	Replace: Folding Knife HP PS (PS22)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN25 - PS20	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

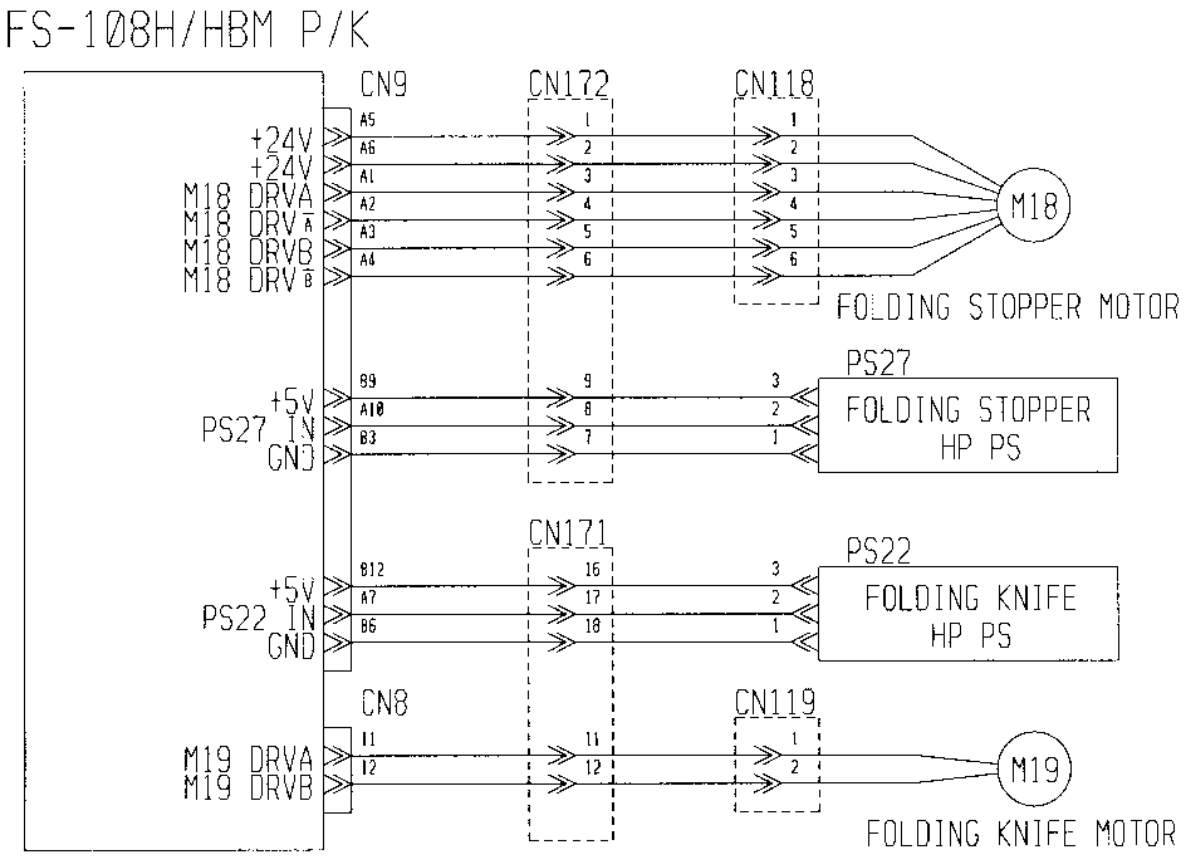


Figure 5-21. Error Codes E2EB & E2EC

5.2.43. E2ED STAPLER & FOLDING STOPPER

PRIMARY FACTOR;	During the Stapling & Folding Stopper operation, the Stapling & Folding Stopper HP PS continues being ON (L) or does not turn on (L).		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs because the Stapling & Folding Stopper does not operate.	1. The drive system for the Stopper & Folding Stopper is faulty.	Check: Stopper & Folding Stopper or its environs.	
	2. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN26 - M14	
	3. Motor fault.	Replace: Stapling & Folding Stopper Motor (M14)	3.5, 3-7
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7
2. This phenomenon occurs though the Stapling & Folding Stopper operates.	1. The mounting of the sensor is faulty.	Reset the Sensor correctly. Stapling & Folding Stopper HP PS (PS23)	3.4, 3-3
	2. Sensor fault.	Replace: Stapling & Folding Stopper HP PS (PS23)	3.4, 3-3
	3. The breaking of cables or the disconnecting of connectors.	Repair the cable or reset the connector CN26 - PS23	
	4. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

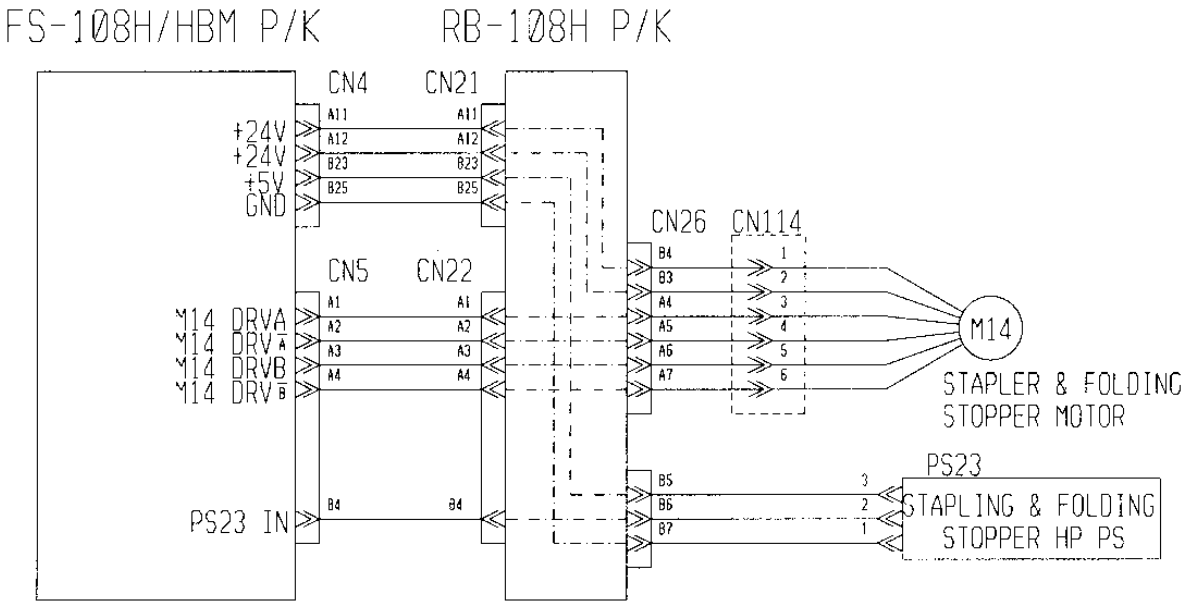


Figure 5-22. Error Code E2ED

5.2.44. E2EE FNS SIGNAL TRANSLATION ERROR

PRIMARY FACTOR;	A translation error has occurred Finisher P/K.		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. PCB fault.	Replace: FS-108H/HBM P/K	3.5, 3-7

5.2.45. E259 CONFIGURATION ERROR

PRIMARY FACTOR;	Finisher configuration is changed. Printer: The Printer memorizes a finisher configuration. The default of it is "Standard type". The Printer detects the configuration error if a configuration memorized in the Printer is different from one reported from the Finisher when powered on. The Configuration error is automatically reset and a configuration reported from the Finisher is automatically memorized in the Printer after the Printer is turned OFF and ON. Finisher: Finisher judges a connection by the following condition. Folding unit : FS-108HBM P/K detects that the "BM SET signal" is low. (B6 pin and B7 pin of CN5 are connected.) Cover Sheet Feeder : FS-108H/HBM P/K detects that the "SHEET SET signal" is low. (A24 pin of CN51 and 7 pin of CN1 are connected.)		
PHENOMENON	**CAUSES & CHECK POINTS**	**CORRECTIONS**	**Maintenance Ref + Page**
1. This phenomenon occurs.	1. Right after finisher configuration is changed.	Turn OFF/ON the Printer	
	2. PCB fault.	Replace: FS-108H/HBM P/K Replace: PI-108H P/K	3.5, 3-7 3.5, 3-7
	3. The breaking cables or the disconnecting of connectors.	Repair the cable or reset the connector.	

	Finisher Configuration	
1.	Standard type	Default
2.	Standard type + Folding unit	
2.	Standard type + Cover Sheet Feeder	
4.	Standard type + Folding unit + Cover Sheet Feeder	

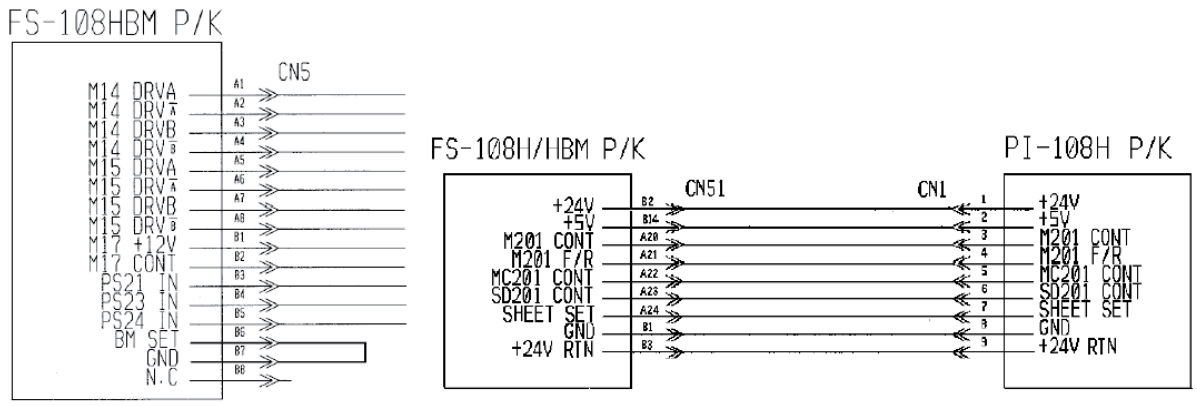


Figure 5-23. Error Code E259

Chapter 6. Disassembling, Assembling & Adjustment

6.1. Removal of the Cover Parts

6.1.1. Composition

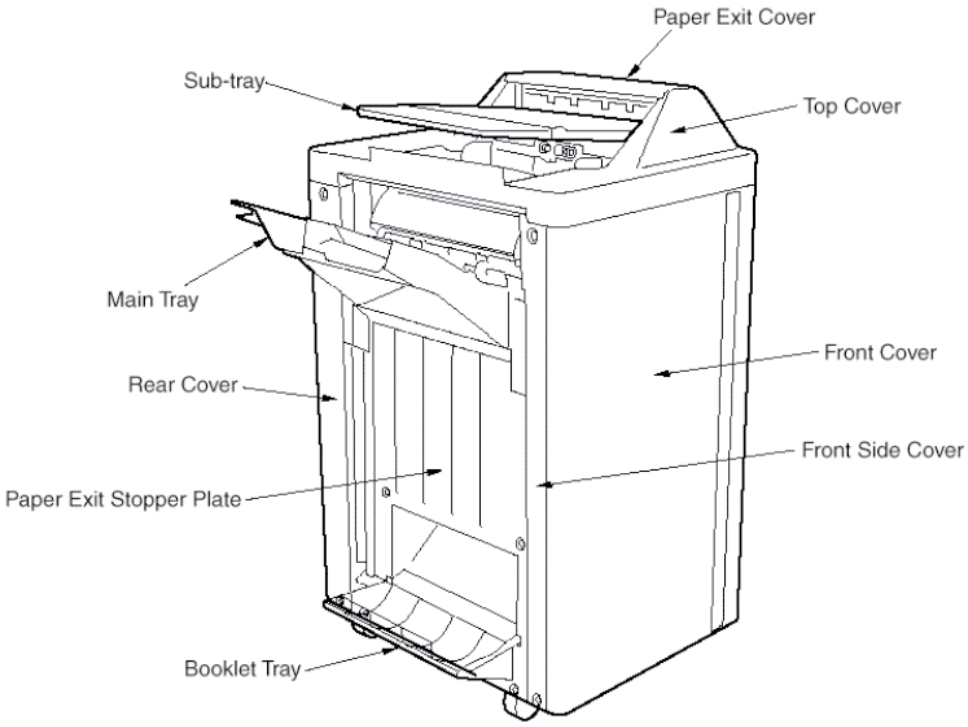


Figure 6-1. Names of the covers

6.1.2. Removal of the Rear Cover

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Unscrew the five + screws to remove the Rear Cover.

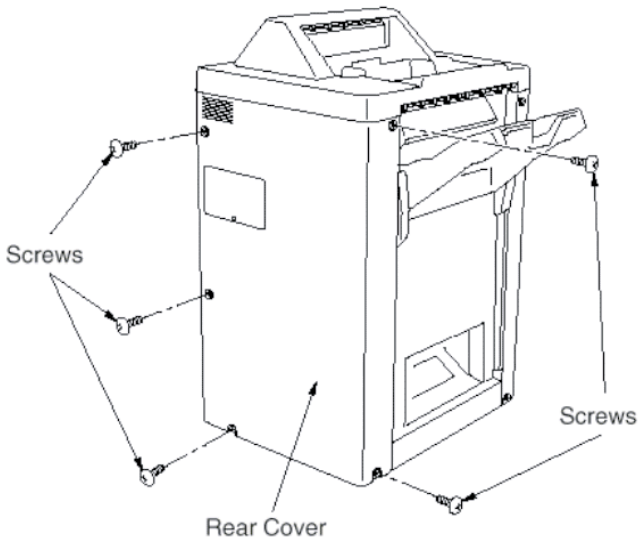


Figure 6-2. Removal of the Rear Cover

[Assembling Procedures]

1. Reinstall the Rear Cover reversing the procedure above.

6.1.3. Removal of the Front Cover

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Open the Front Cover.
2. Unscrew the two + screws to remove the hinge and remove the Front Cover.

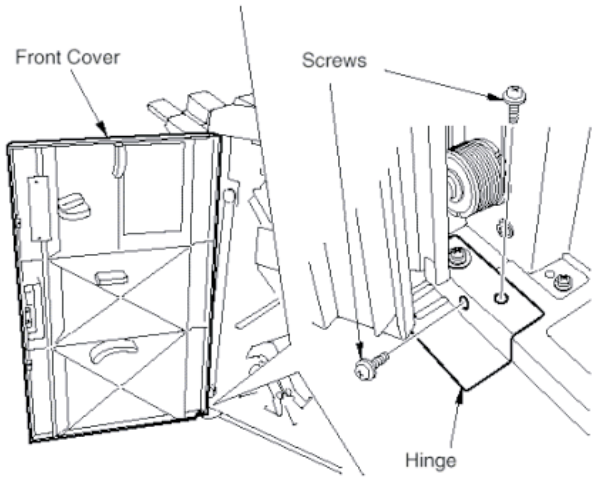


Figure 6-3. Removal of the Front Cover

[Assembling Procedures]

1. Reinstall the Front Cover reversing the procedure above.

6.1.4. Removal of the Top Cover & the Paper Exit Cover

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Open the Paper Exit Cover and remove the 2 screws holding the sub-tray and remove the sub-tray.

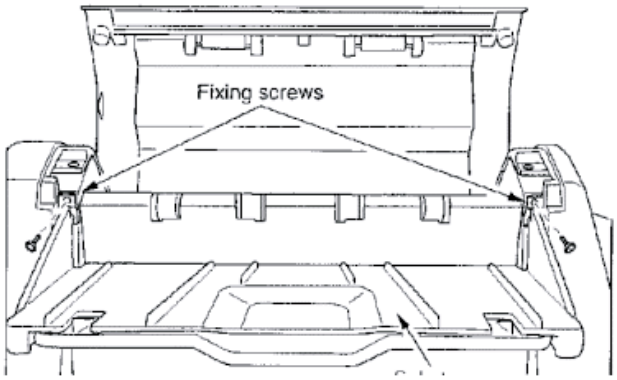


Figure 6-4. Removal of the Top Cover and the Paper Exit Cover

2. Remove the two caps.
3. Open the Front Cover.
4. Remove the 6 screws holding the Top Cover and Remove the Top Cover.

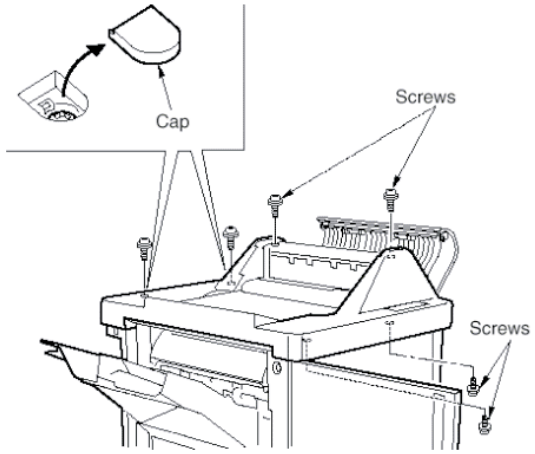


Figure 6-5. Removal of the Top Cover and the Paper Exit Cover

5. Remove the 2 screws holding the Paper Exit Cover and remove the Paper Exit Cover.

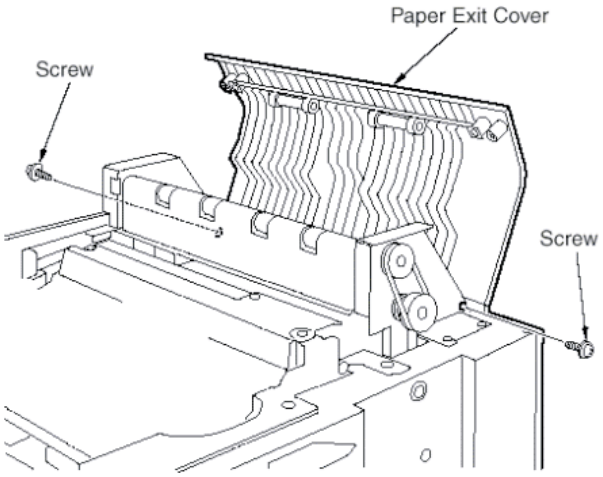


Figure 6-6. Removal of the Top Cover and the Paper Exit Cover

[Assembling Procedures]

1. Reinstall the Top Cover and the Paper Exit Cover reversing the procedure above.

6.1.5. Removal of the Main Tray

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Push the Tray Upper-limit Sensor beside the Paper Exit Roller, then the Main Tray goes down.
2. Open the Front Cover to make the Main Tray stopped.
3. Turn **OFF** the **MAIN AC POWER**.
4. Remove the 2 screws holding the Main Tray and lift the Main Tray up and off.

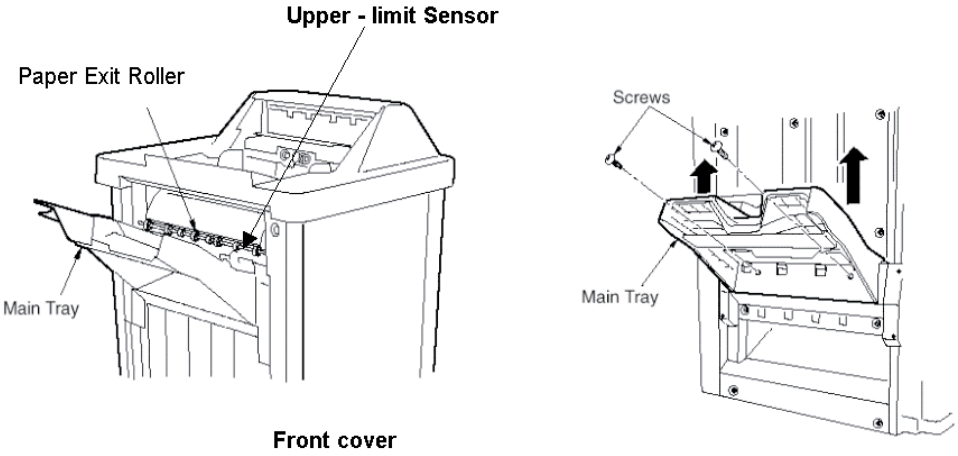


Figure 6-7. Removal of the Main Tray

[Assembling Procedures]

1. Reinstall the Main Tray reversing the procedure above.

6.1.6. Removal of the Paper Exit Pressure Plate

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the following parts.
   Rear cover (Refer to item 6.1.2 on page 6-2)
   Main tray (Refer to item 6.1.5 on page 6-6)
   Booklet tray
   Front cover (Refer to item 6.1.3 on page 6-3)
   Front side cover.
2. Remove the six +screws holding the three kinds of side covers.

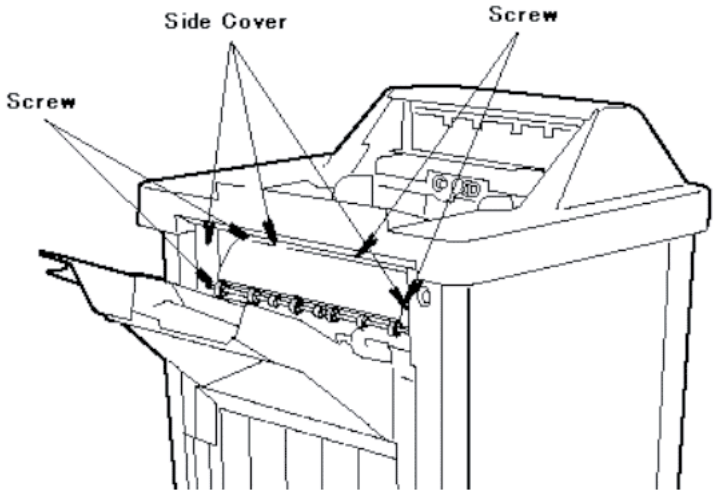


Figure 6-8. Removal of the Up-down Covers

3. Remove the four +screws holding the left and right Up-down Covers and remove these two covers.

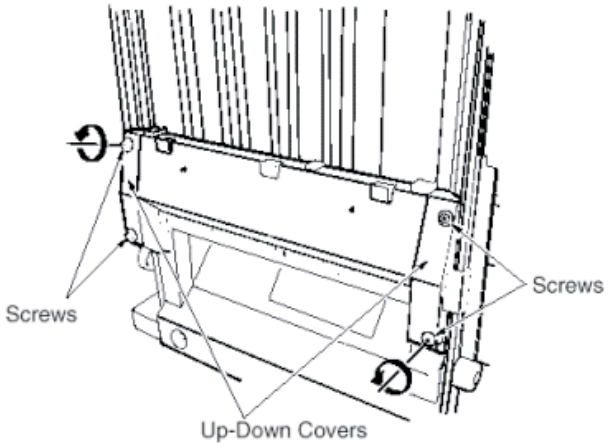


Figure 6-9. Removal of the Up-down Covers

4. Remove the four +screws from the front and rear Wire Brackets (two screws at each bracket), and then remove the Up-down Stay.

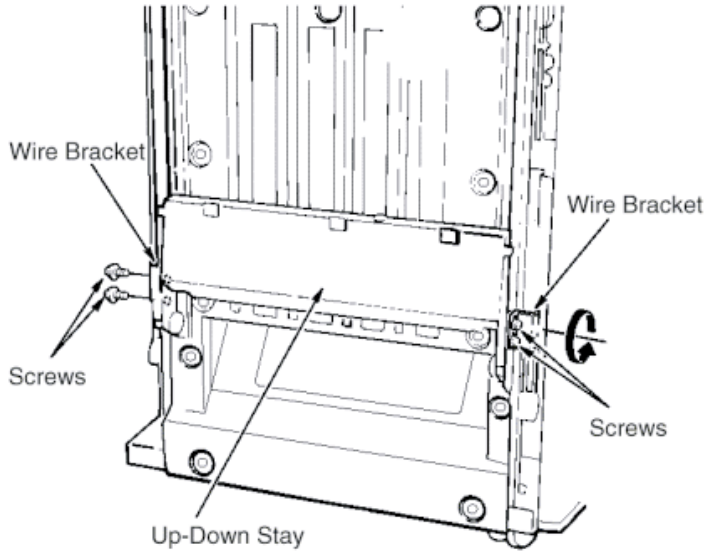


Figure 6-10. Removal of the Up-down Stay

5. Remove eight +screws and take off the front and rear Auxiliary Plates.

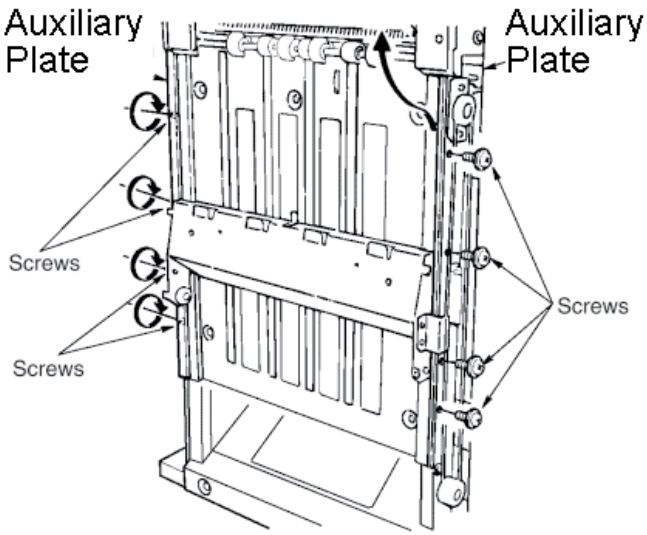


Figure 6-11. Removal of the Auxiliary Plates

6. Remove the two plates (front and back plates) at the booklet exit

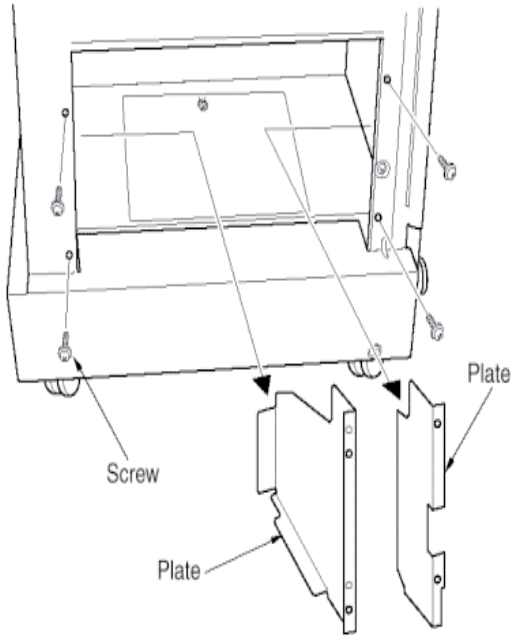


Figure 6-12. Removal of the Plates

7. Remove 13 +screws and take off the Paper Exit Pressure Plate.

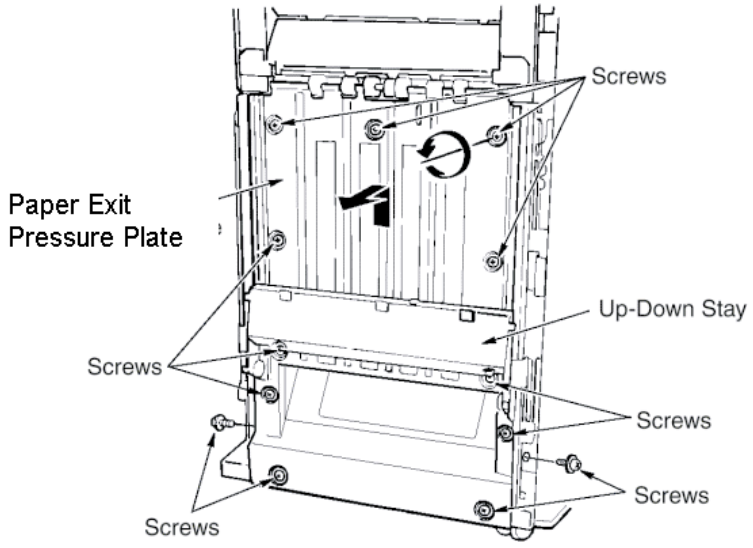


Figure 6-13. Removal of the Paper Exit Pressure Plate

[Assembling Procedures]

1. Reinstall the Paper Exit Pressure Plate reversing the procedure above.

CAUTION:
Be sure to press down on the up-down stay while tightening the four screws for the Wire Bracket.

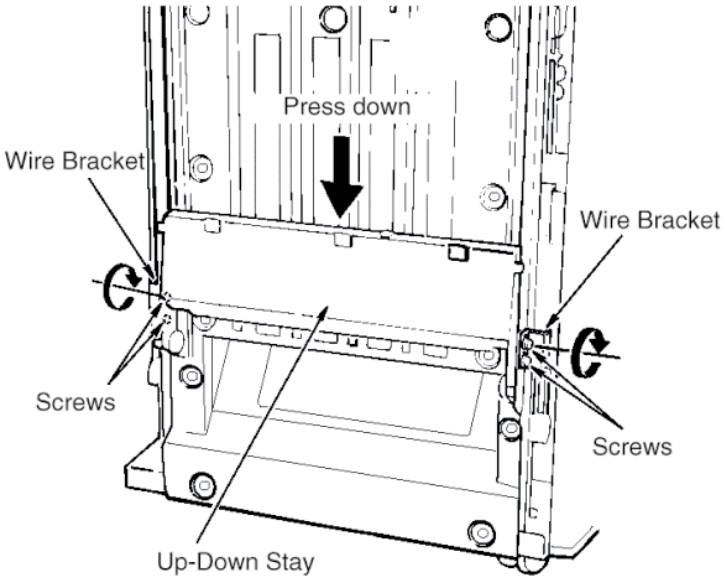


Figure 6-14. Reinstallation of the Paper Exit Pressure Plate

6.2. Removal of the Shift Unit Parts

6.2.1. Removal of the Shift Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the following parts.
   Rear cover (Refer to item 6.1.2 on page 6-2)
   Top Cover (Refer to item 6.1.4 on page 6-4)
   Cover Sheet Feeder (If installed) (Refer to item 6.2.7 on page 6-26)
2. Detach the M2 (roller shift) and PS18 (roller shift HP) connectors.
3. Remove the wiring from the three clamps.

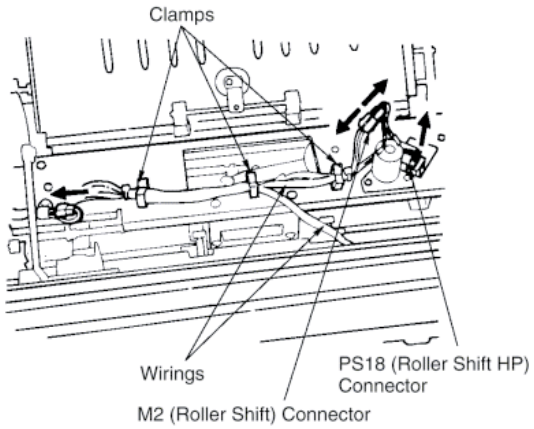


Figure 6-15. Removal of the Shift Unit

4. Remove the ground wire fixing screw.
5. Remove the clamp screw.
6. Remove the four + screws.

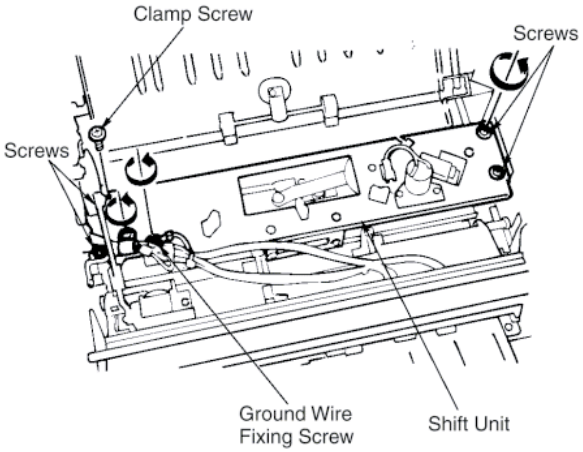


Figure 6-16. Removal of the Shift Unit

7. Remove three +screws and remove the Shift Pulley.
8. Slide the Conveyance Slide Shaft and take out the Shift Unit.

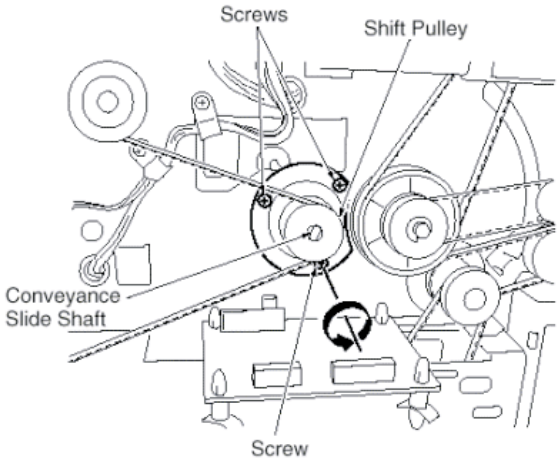


Figure 6-17. Removal of the Shift Unit

[Assembling Procedures]

1. Reinstall the Shift Unit by reversing the procedure above.

CAUTION:
When reinstalling the Shift Unit, be sure to align the Conveyance Slide Shaft with the hole in the Shift Pulley.

6.2.2. Removal of the Paper Exit Opening Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Jewel Screwdriver, Pliers.

[Disassembling Procedures]

1. Remove the following parts.
   Rear cover (Refer to item 6.1.2 on page 6-2)
   Top Cover (Refer to item 6.1.4 on page 6-4)
   Cover Sheet Feeder (If installed) (Refer to item 6.2.7 on page 6-26)
   Front Side Cover
   Shift Unit (Refer to item 6.2.1 on page 6-11)
2. Remove the Pulley and its Belt.
3. Remove the E-ring, and then remove the Collar, the Gear, and the Drive Belt.
4. Remove the Collar, E-ring and the Shaft Holder.

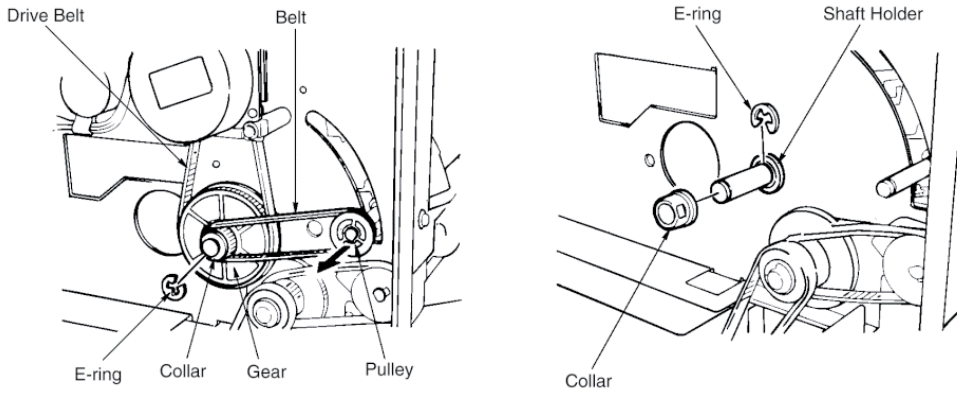


Figure 6-18. Removal of the Paper Exit Opening Unit

5. Remove the clamp screw and the ground wire screw.
6. Detach the SD4 (paper exit opening) and PS6 (paper exit-1) connectors.
7. Remove the screw holding PS10 (paper exit-2) to the unit.
8. Remove PS10 and detach the connector.

CAUTION:
When withdrawing the PS10, ensure that needless force is not applied to the lever below the PS10.

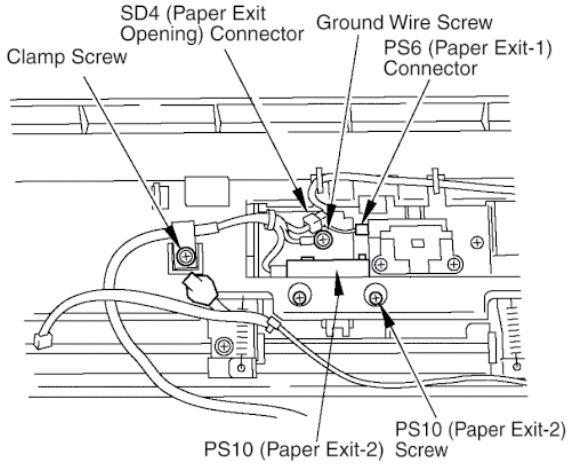


Figure 6-19. Removal of the Paper Exit Opening Unit

9. Remove the Paper Exit Opening Open-shut Link screw.

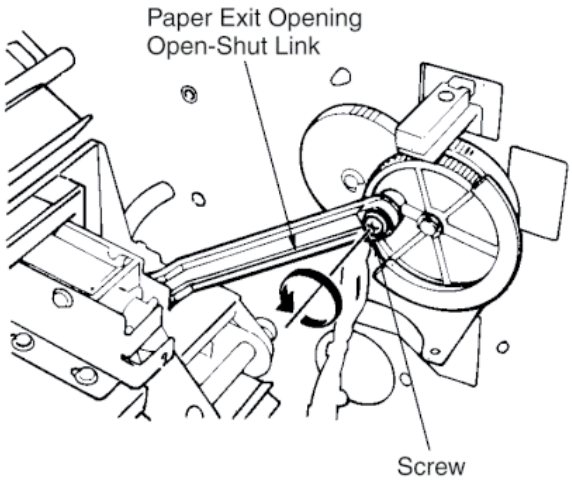


Figure 6-20. Removal of the Paper Exit Opening Unit

10. Open the Front Cover. Remove the Front Side E-ring and the Shaft Holder.
11. Remove the spring.

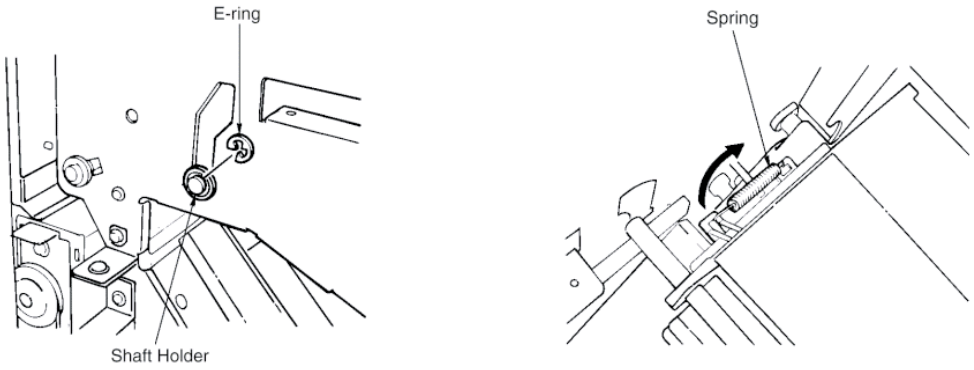


Figure 6-21. Removal of the Paper Exit Opening Unit

12. Remove the four +screws holding the Paper Exit Opening Cover and take off the cover.
13. Lift the Paper Exit Opening Unit up and out.

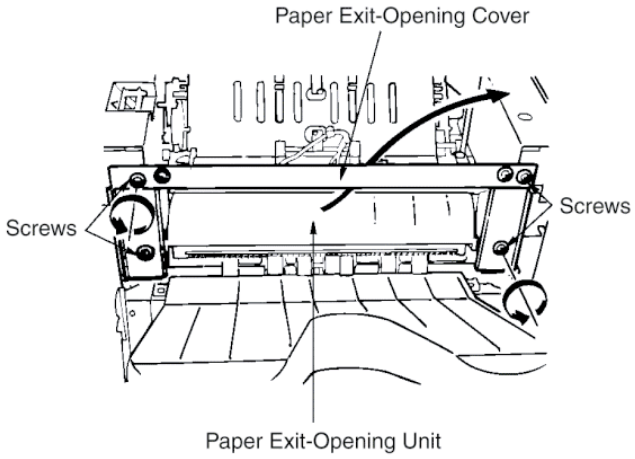


Figure 6-22. Removal of the Paper Exit Opening Unit

[Assembling Procedures]

1. Reinstall the Paper Exit Opening Unit reversing the procedure above.

6.2.3. Removal of the Stacker/Stapler Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Open the Front Cover and pull the Stacker/Stapler Unit part of the way out.
2. Remove the two rail-stopper screws. Then pull the Stacker/Stapler Unit all of the way out.

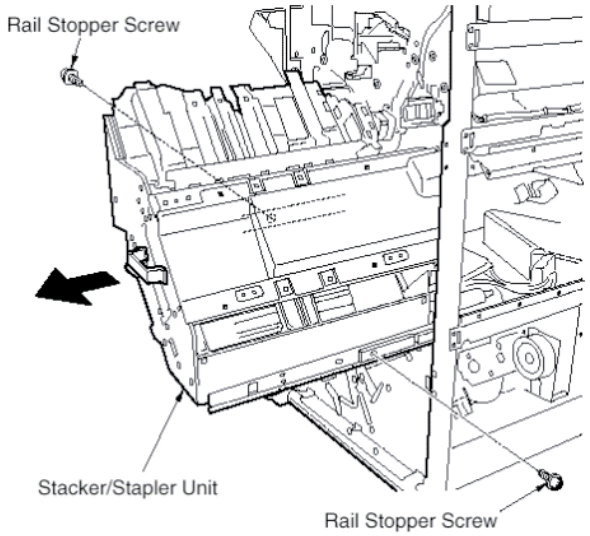


Figure 6-23. Removal of the Stacker/Stapler Unit

3. Remove 4 +screws holding the cover and remove the cover.

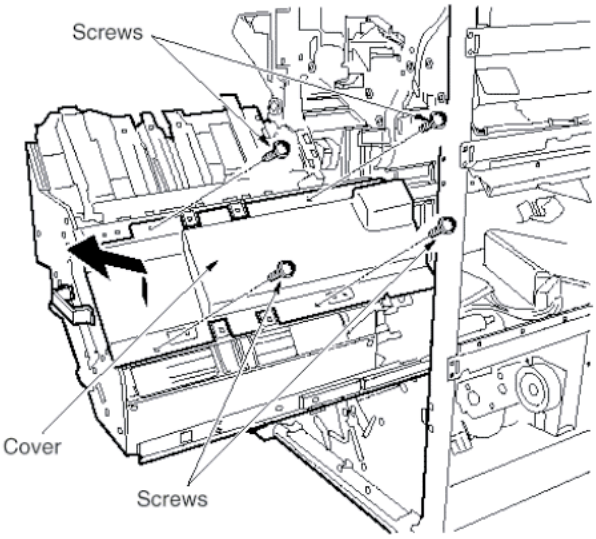


Figure 6-24. Removal of the Stacker/Stapler Unit

4. Remove the 2 set screws holding the Bundle Guide Arm to the Stacker/Stapler Unit.

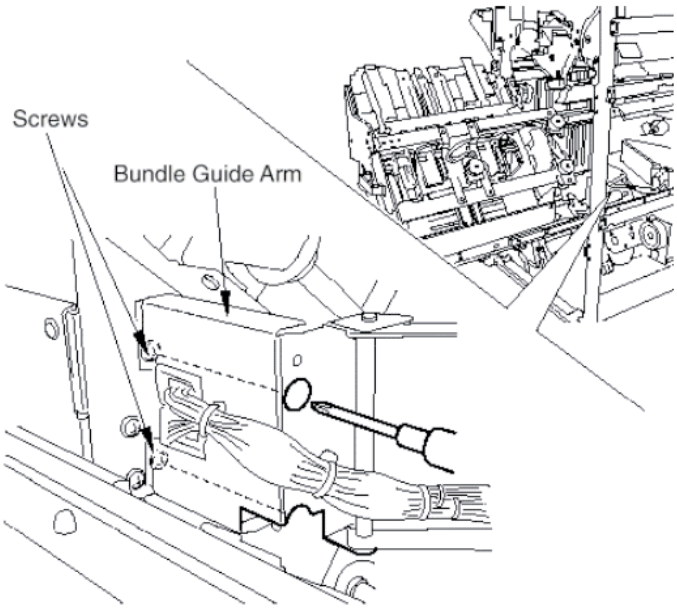


Figure 6-25. Removal of the Stacker/Stapler Unit

5. Detach the two connectors from the connector board at the rear of the Stacker/Stapler Unit.

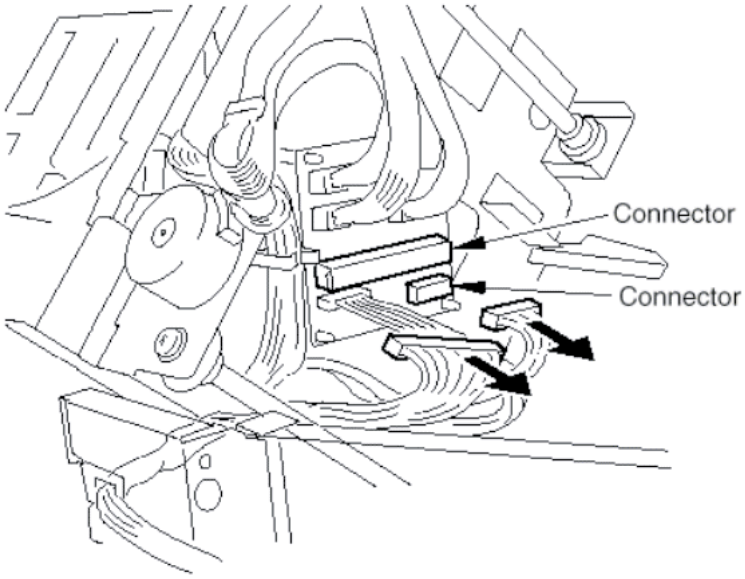


Figure 6-26. Removal of the Stacker/Stapler Unit

6. Remove the four +screws holding the Cartridge Rails and take out the Cartridge Rails.

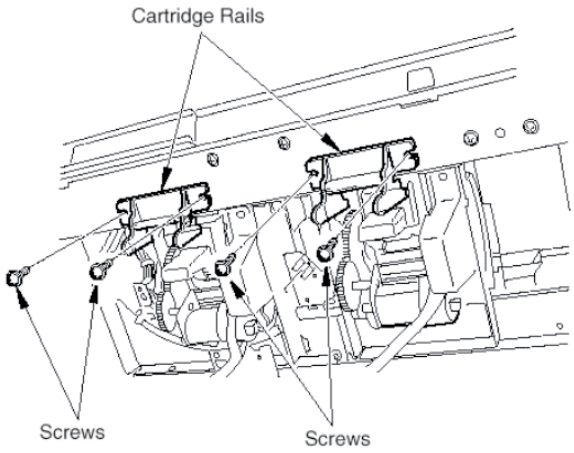


Figure 6-27. Removal of the Stacker/Stapler Unit

7. Remove the final four +screws holding the Stacker/Stapler Unit . Remove the Stacker/stapler unit.

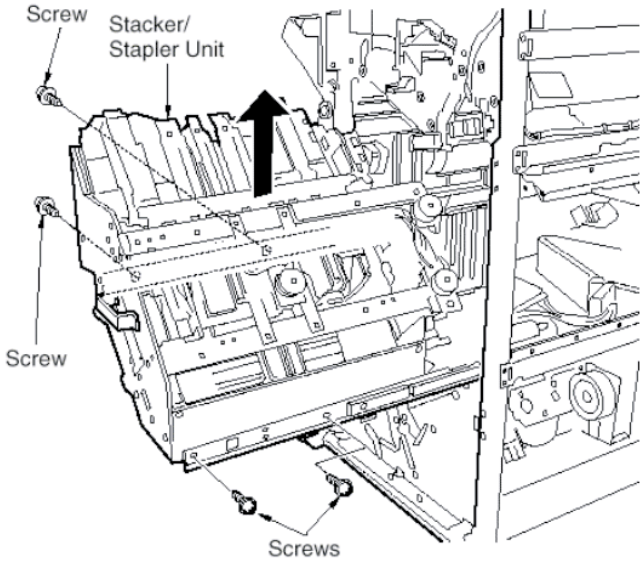


Figure 6-28. Removal of the Stacker/Stapler Unit

[Assembling Procedures]

1. Reinstall Stacker/Stapler Unit reversing the procedure above.

6.2.4. Removal of the Clincher Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Stapler Jig.

[Disassembling Procedures]

1. Remove the Front Cover. (Refer to item 6.1.3 on page 6-3)
2. Pull out the Stacker/Stapler Unit by pulling on the handle.
3. Remove the two rail-stopper screws.

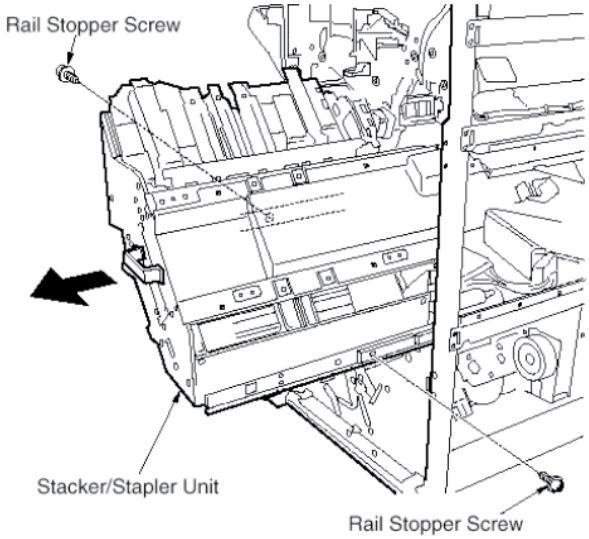


Figure 6-29. Removal of the Stacker/Stapler Unit

4. Remove the four +screws holding the cover and remove the cover.

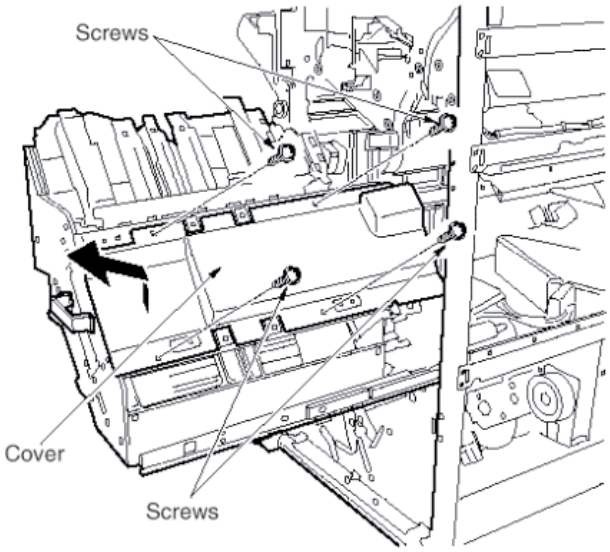


Figure 6-30. Removal of the Stacker/Stapler Unit

5. Detach the connector from the Clincher and remove the four +screws holding the Clincher.

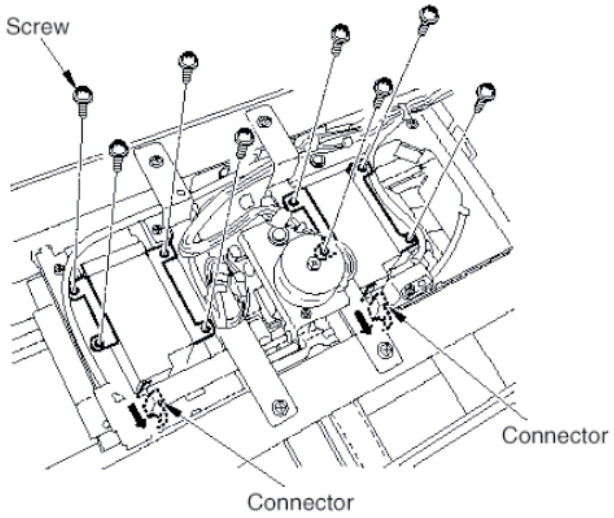


Figure 6-31. Removal of the Clincher Unit

6. Lift the Clincher up and out.

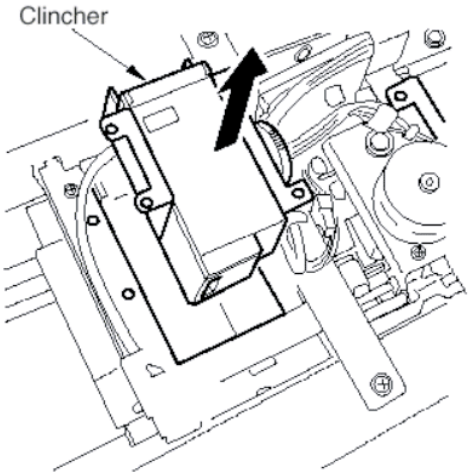


Figure 6-32. Removal of the Clincher Unit

[Assembling Procedures]

1. Reinstall Clincher Unit reversing the procedure above.
2. Adjust the stapler vertical position. (Refer to item 6.3.17 on page 6-52)

6.2.5. Removal of the Up-down Wire

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Push-pull Gauge.

[Disassembling Procedures]

CAUTION:
The following procedure shows replacement of the rear wire Removal of the front wire is similar, but relationships are inverted (mirror image).

1. Remove the Following parts:
   Rear Cover (Refer to item 6.1.2 on page 6-2)
   Front Cover (Refer to item 6.1.4 on page 6-4)
   Front Side Cover
   Main Tray
2. Remove the four wire-bracket screws (2 screws at the front wire bracket and 2 screws at the rear wire bracket), and take off the Up- down Stay.

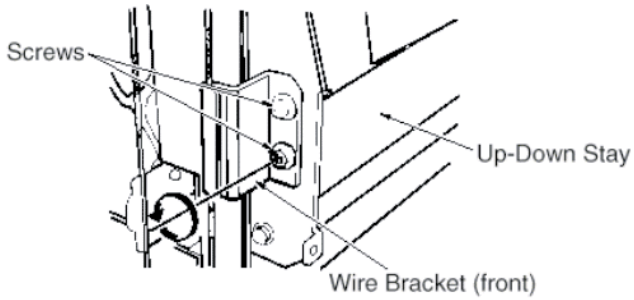


Figure 6-33. Removal of the Up-down Wire

3. Remove the E-ring and the Lower Up-down Pulley and remove the wire.

CAUTION:
There is a pin located in the inside of the pulley. Take care to avoid losing the pin when removing the pulley.

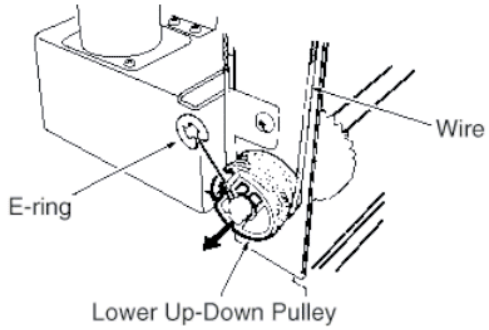


Figure 6-34. Removal of the Up-down Wire

[Assembling Procedures]

1. Move the Up-down Stay so that the inner wire which is not removed (the shorter side from the Wire Bracket) is wound twice around the pulley.

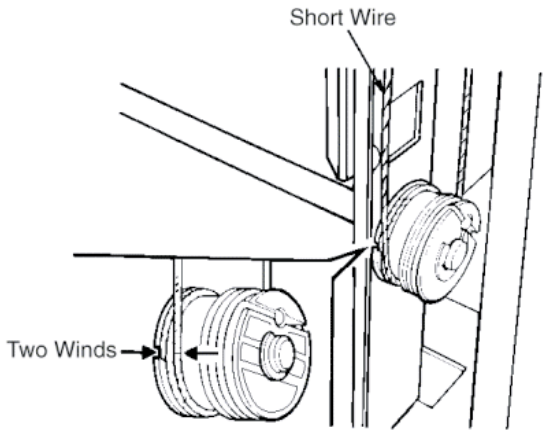


Figure 6-35. Assembly of the Up-down Wire

2. Wrap the shorter side of the wire (from the Wire Bracket) being exchanged around the Up-down Pulley twice.
3. Adjust the wire-bracket position so that it is even@with the another wire bracket. Insert the pin, and then fasten the pulley into place with the E-ring.
4. Fit the wire onto the Upper Pulley.

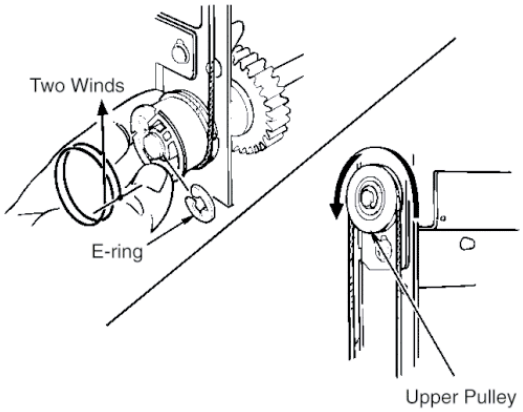


Figure 6-36. Assembly of the Up-down Wire

5. Wind the opposite side of the wire (the long side) from the inside of the Up-down Pulley toward the outside, and fix the wire end.

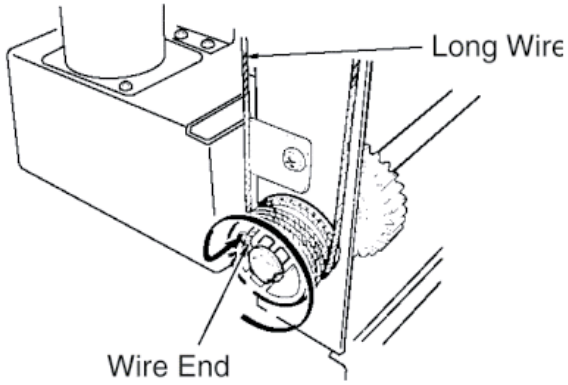


Figure 6-37. Assembly of the Up-down Wire

6. Press down on the Up-down Stay and refasten the four wire-bracket screws.

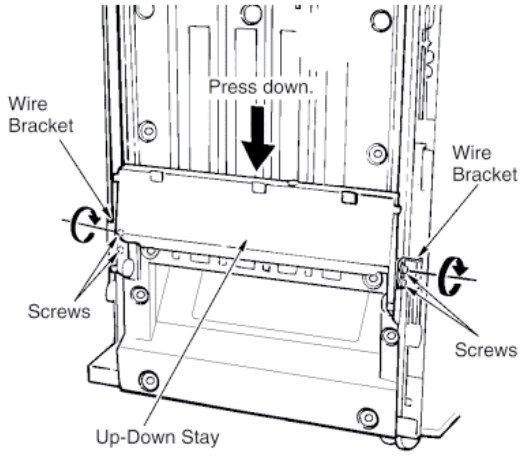


Figure 6-38. Assembly of the Up-down Wire

7. Loosen the two belt-tensioner set screws.
8. Using a Push-pull Gauge, pull the belt tensioner so that tension A is at the value indicated below. Maintain this tension while re-tightening the screws.
   Spec value for tension: A = 2.5±0.1kg.

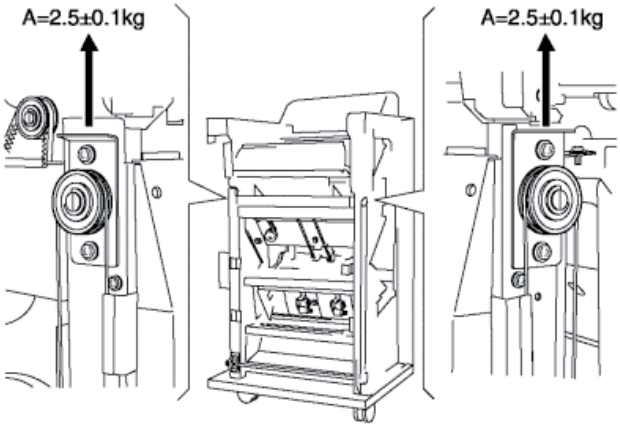


Figure 6-39. Assembly of the Up-down Wire

6.2.6. Removal of the Folding Unit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove four +screws at the rear as illustrated below.

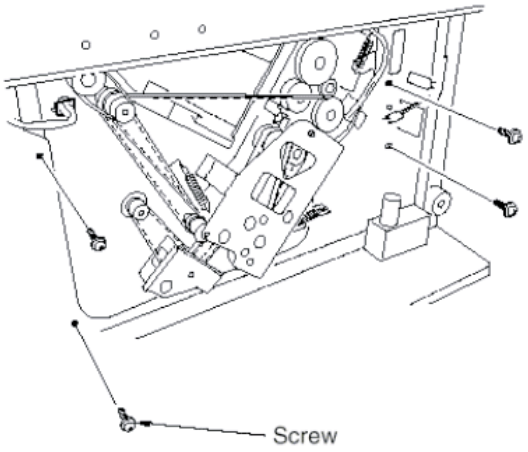


Figure 6-40. Removal of the Folding Unit

3. Detach 3 connectors.

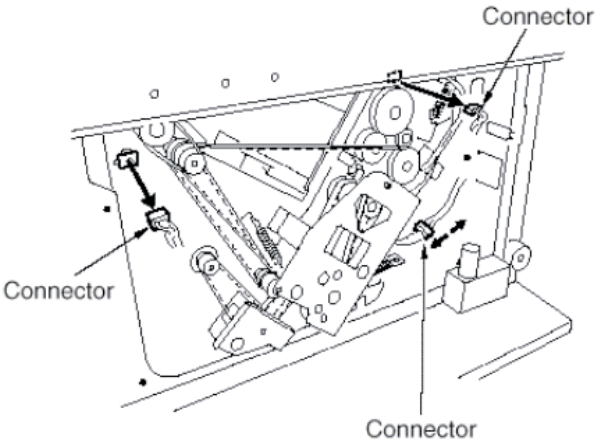


Figure 6-41. Removal of the Folding Unit

4. Remove the two plates from the booklet exit (one plate on each side).

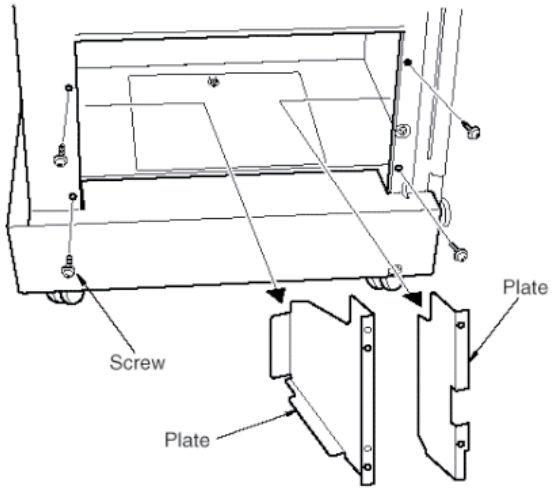


Figure 6-42. Removal of the Folding Unit

5. Remove seven set screws at the front.
6. Pull the Folding Unit out and off.

CAUTION:
Be careful to keep the unit clear of the up/down wires when removing it.

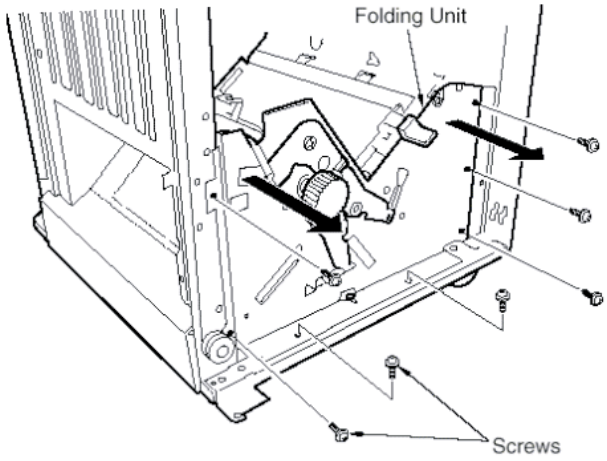


Figure 6-43. Removal of the Folding Unit

[Assembling Procedures]

1. Reinstall the Folding Unit reversing the procedure above.

CAUTION:
Be careful to keep the harness from catching on the finisher body.

6.2.7. Removal of the Cover Sheet Feeder

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the Top Cover. (Refer to item 6.1.4 on page 6-4)
2. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
3. Remove the 3 connectors.
4. Remove the 6 screws and the Cover Sheet Feeder.

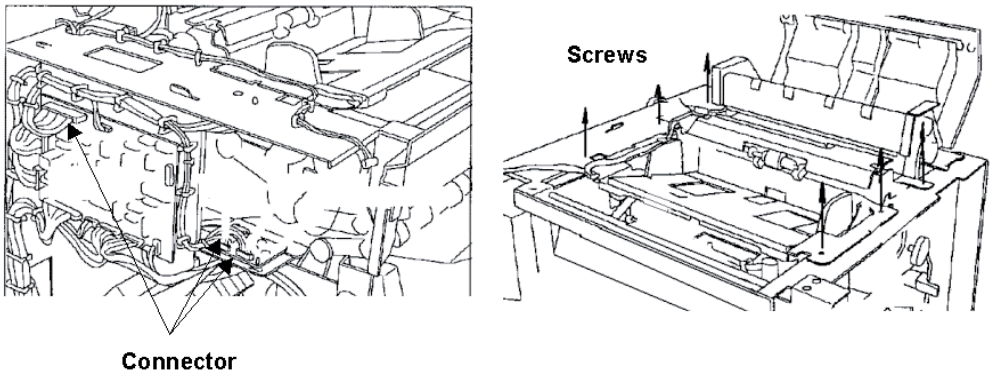


Figure 6-44. Removal of the Cover Sheet Feeder

[Assembling Procedures]

1. Reinstall the Cover Sheet Feeder reversing the procedure above.
2. When installing the Cover Sheet Feeder, make sure to position it by pushing to toward the printer side.

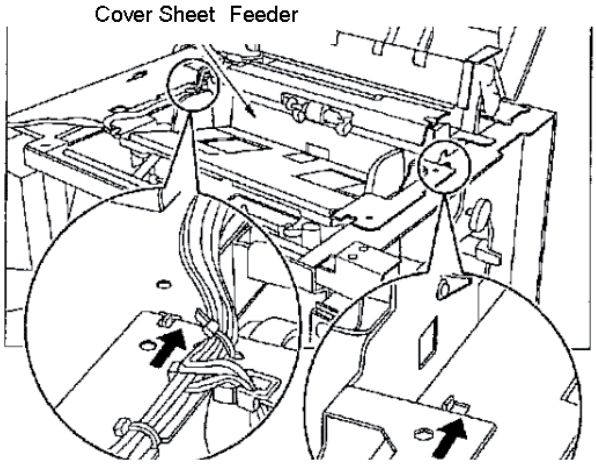


Figure 6-45. Removal of the Cover Sheet Feeder

6.2.8. Removal of the Cover A

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the sub-tray.
2. Remove the 2 screws and remove the cover A.

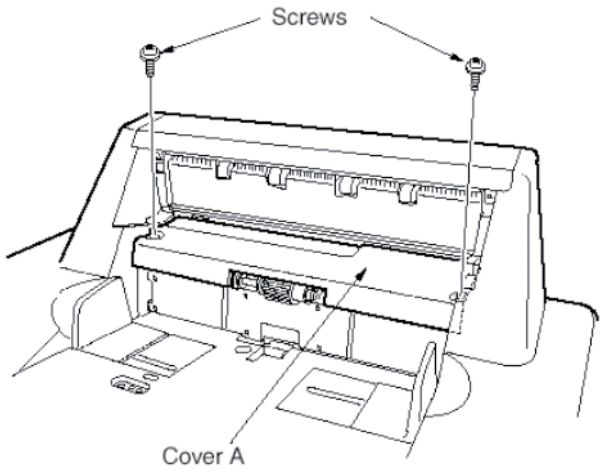


Figure 6-46. Removal of the Cover A

[Assembling Procedures]

1. Reinstall the Cover A reversing the procedure above.

6.2.9. Removal of the Paper Feed Roller and the Feed Roller

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the sub-tray and the cover A. (Refer to item 6.2.8 on page 6-27)
2. Remove the 2 Stop rings, Then shift the left and right bearings outside, and remove the feed roller.

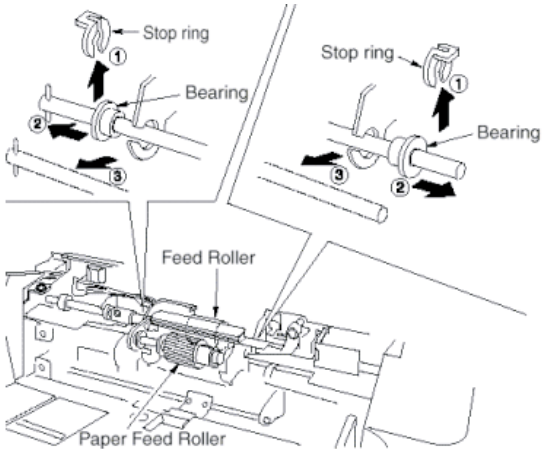


Figure 6-47. Removal of the Paper Feed Roller and the Feed Roller

3. Pull out three stop rings, the three bearings, the actuator and two shaft of the feed-roller unit then remove each roller.

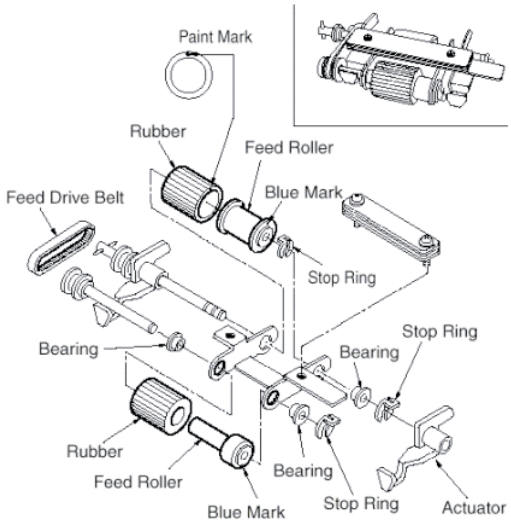


Figure 6-48. Removal of the Paper Feed Roller and the Feed Roller

[Assembling Procedures]

1. Reinstall the Paper Feed Roller and the Feed Roller reversing the procedure above.

CAUTION:
Ensure that the mounting direction of the rubber is correct.

6.2.10. Removal of the Rubber, Double Feed Prevention Roller

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Disassembling Procedures]

1. Remove the cover A. (Refer to item 6.2.8 on page 6-27)
2. Remove the feed roller unit. (Refer to item 6.2.9 on page 6-28)
3. Remove the 4 set screws, Then remove the plate.
4. Remove the 3 stop rings, then pull out the shaft, and remove the double-feed-prevention roller together with the feed-reverse gear.
5. Remove the rubber from the double-feed-prevention roller.

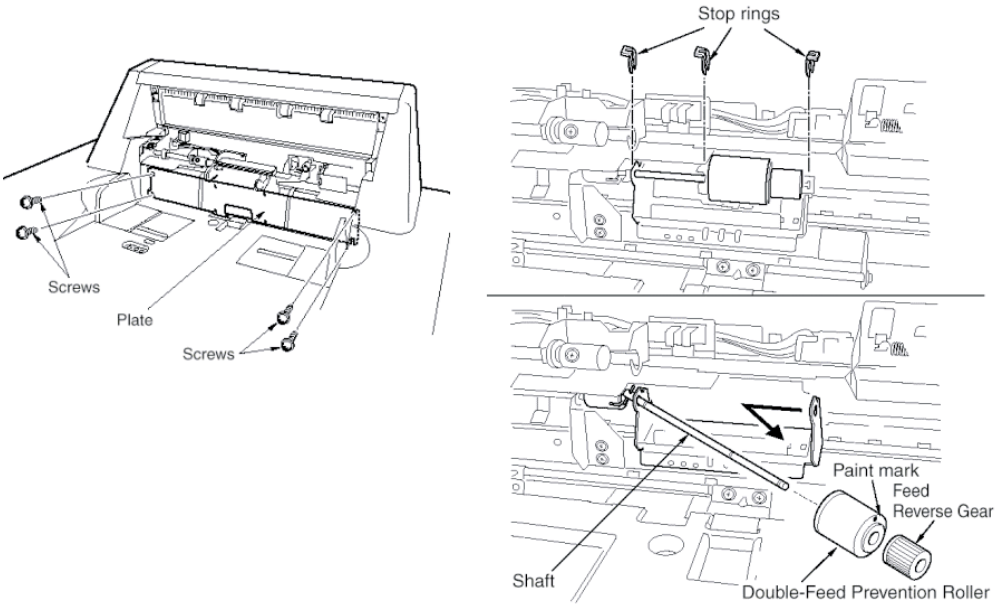


Figure 6-49. Removal of the Rubber, Double Feed Prevention Roller

[Assembling Procedures]

1. Reinstall the Rubber, Double Feed Prevention Roller reversing the procedure above.

CAUTION:
Ensure that the mounting direction of the rubber is correct.

6.3. Adjustment

6.3.1. Adjusting of the Magnets on the Conveyance Guide Plate B

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Preparation]

1. Open the front cover.
2. Check whether the Conveyance Guide Plate B makes contact with the cushioning rubber when the magnets are stuck to the Conveyance Guide Plate A.
3. If the plate B does not make contact with the cushioning rubber, remove the Rear Cover and carry out adjustment as described below.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Detach all FNS 108H P/K connectors and Remove the wiring from the clamps.
3. Remove the two +screws holding the FNS 108H P/K. Remove the FNS 108H P/K together with its bracket.

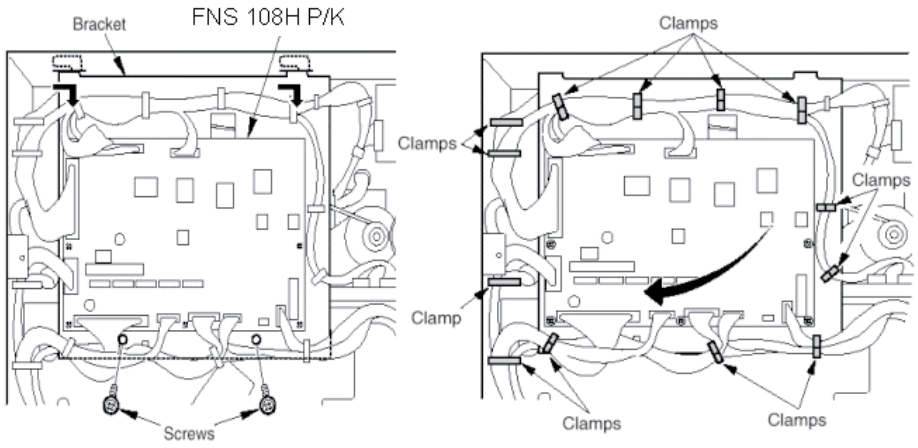


Figure 6-50. Adjustment of the Magnets on the Conveyance Guide Plate B

4. Loosen the four magnet-holding screws (two at the front and two at the back), and move the Conveyance Guide Plate B all the way in the direction indicated by the arrow.
5. Remove the E-ring and the gear.
6. Adhere the magnets to the Conveyance Guide Plate A and retighten the +screws.

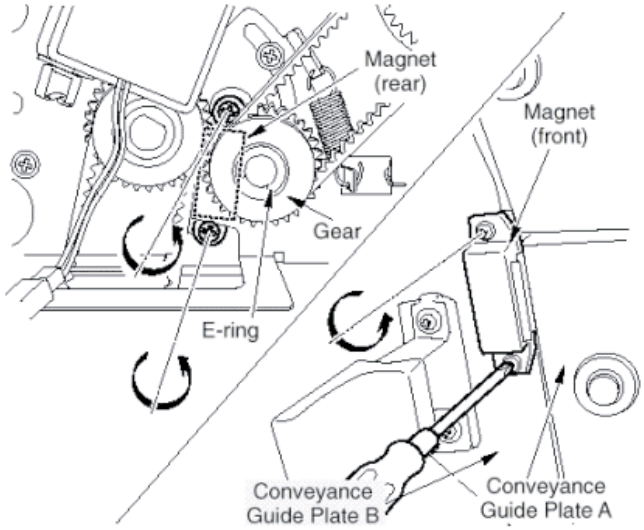


Figure 6-51. Adjustment of the Magnets on the Conveyance Guide Plate B

[Assembling Procedures]

1. Reinstall the FNS 108H P/K reversing the procedure above.

6.3.2. Adjusting of the Magnets on Conveyance Guide Plate C

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Preparation]

1. Open the Front Cover.
2. Check whether the Conveyance Guide Plate C makes contact with the cushioning rubber when the magnets are stuck to the Conveyance Guide Plate D.
3. If the Conveyance Guide Plate C does not make contact with the cushioning rubber, remove the rear cover and carry out adjustment as described below.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the FNS 108H P/K. (Refer to item 6.3.1 on page 6-30)
3. Loosen the four magnet-holding screws (two at the front and two at the back), and move the Conveyance Guide Plate C all the way in the direction indicated by the arrow.
4. Adhere the magnets to the Conveyance Guide Plate A and retighten the +screws.

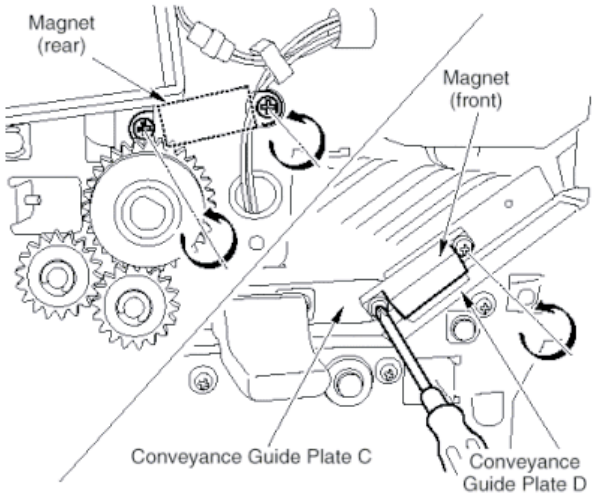


Figure 6-52. Adjustment of the Magnets on the Conveyance Guide Plate C

[Assembling Procedures]

1. Reinstall the FNS 108H P/K reversing the procedure above.

6.3.3. Adjusting of the Sub-tray Paper Exit Gate

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the FNS 108H P/K. (Refer to item 6.3.1 on page 6-30)
3. With SD2 (sub-tray paper exit) OFF, measure the gap between the sub-tray gate and the guide plate (indicated by A in the illustration).
   Spec value for gap: A = 3.5±0.5mm.
4. With SD2 ON, measure the gap between the solenoid plunger and the bracket stopper (indicated by B in the illustration).
   Spec value for gap: B = 5±0.5mm.

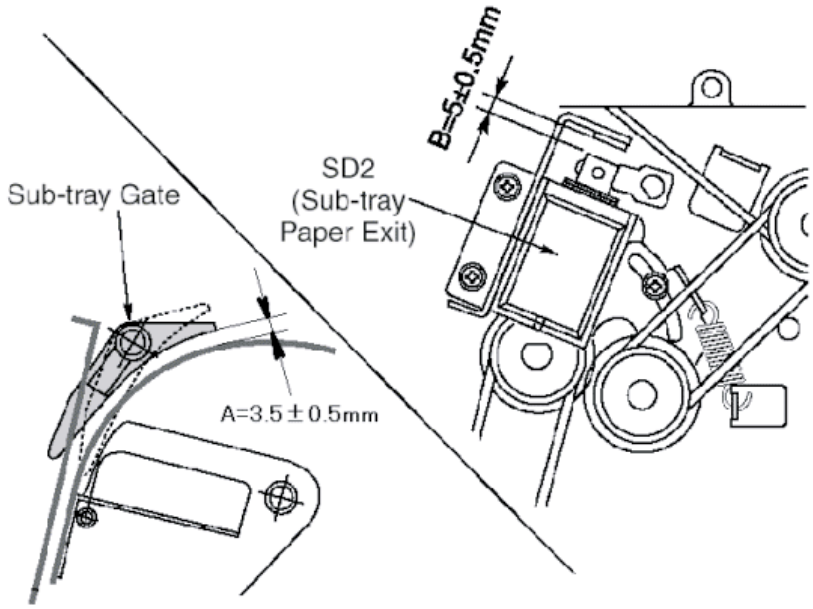


Figure 6-53. Adjustment of the Sub-tray Paper Exit Gate

5. If either gap is out of spec, carry out adjustment as described below.

6. Loosen the 2 set screws holding the solenoid, and move the solenoid as necessary to adjust.
7. Retighten the screws.

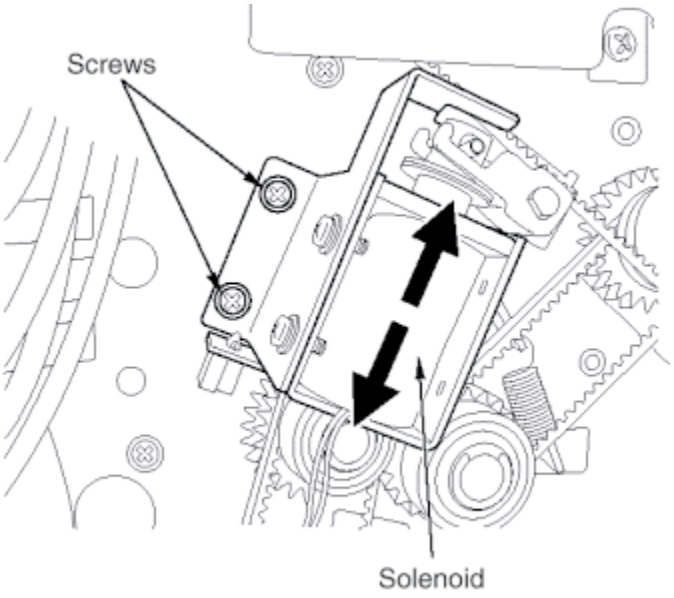


Figure 6-54. Adjustment of the Sub-tray Paper Exit Gate

[Assembling Procedures]

1. Reinstall the FNS 108H P/K and the rear cover reversing the procedure above.

6.3.4. Adjusting the Paper-Path Switching Gate

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the FNS 108H P/K. (Refer to item 6.3.1 on page 6-30)
3. Remove the Top cover. (Refer to item 6.1.4 on page 6-4)
4. Remove the Cover Sheet Feeder (if installed). (Refer to item 6.2.7 on page 6-26)
5. With SD1 (gate) ON, measure the distance between the long gate and the guide plate, 7. indicated by A in the illustration.
   Spec value for distance: A = 7.6±0.5mm.
6. Again with SD1 ON, measure the gap between the solenoid plunger and the bracket stopper (indicated by B in the illustration).
   Spec value for gap: B = 5±0.5mm.

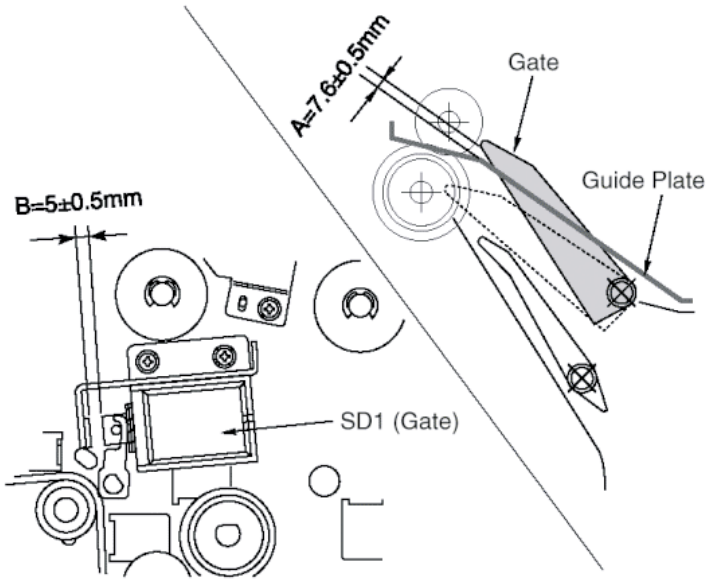


Figure 6-55. Adjustment of the Paper path switching Gate

7. If either measurement is out of spec, carry out adjustment as described below.
8. Loosen the 2 set screws holding the solenoid, and move the solenoid as necessary to adjust.
9. Retighten the screws.

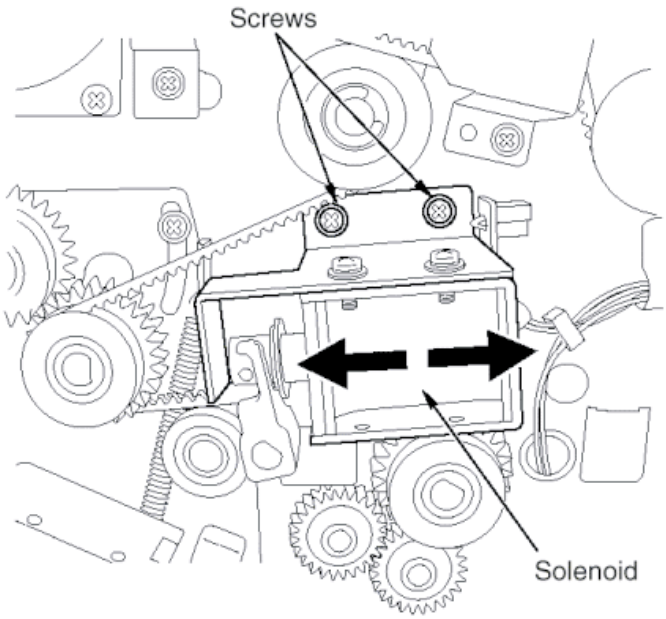


Figure 6-56. Adjustment of the Paper path switching Gate

[Assembling Procedures]

1. Reinstall the FNS 108H P/K , the rear cover and the Cover Sheet Feeder (If installed) reversing the procedure above.

6.3.5. Adjusting the By-pass Gate

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Open the front cover and the guide plate.
3. Remove the FNS 108H P/K. (Refer to item 6.3.1 on page 6-30)
4. With SD5 (by-pass) OFF, measure the distance between the by-pass gate and the guide plate, indicated by A in the illustration.
   Spec value for distance: A = 4.3±0.5mm.
5. With SD5 ON, measure the gap between the solenoid plunger and the bracket stopper (indicated by B in the illustration).
   Spec value for gap: B = 5±0.5mm.

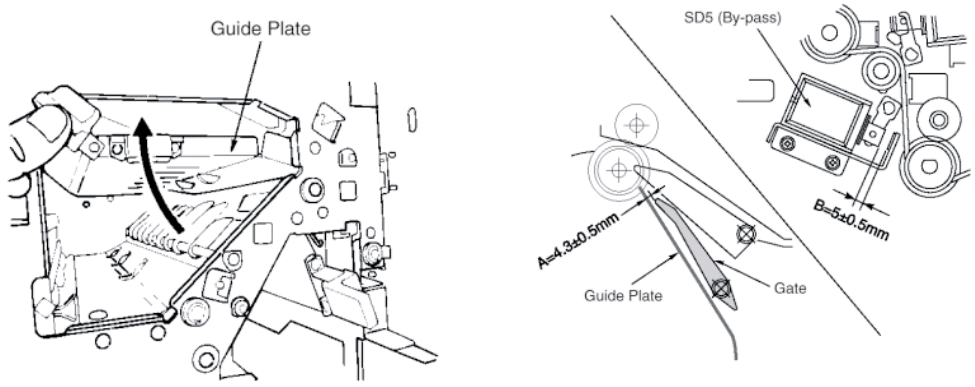


Figure 6-57. Adjustment of the By-pass Gate

6. If either measurement is out of spec, carry out adjustment as described below.
7. Loosen the 2 set screws holding the solenoid, and move the solenoid as necessary to adjust.
8. Retighten the screws.

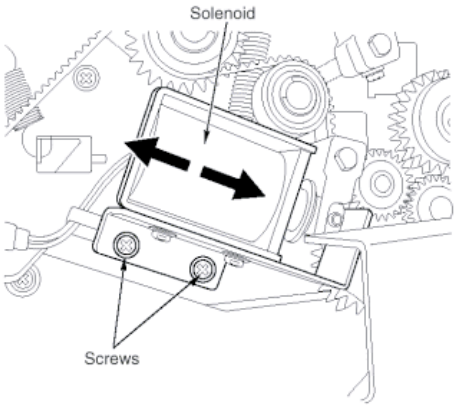


Figure 6-58. Adjustment of the By-pass Gate

[Assembling Procedures]

1. Reinstall the FNS 108H P/K reversing the procedure above.

6.3.6. Adjusting the Shift position

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the Top cover. (Refer to item 6.1.4 on page 6-4)
3. Remove the Cover Sheet Feeder (if installed). (Refer to item 6.2.7 on page 6-26)
4. Switch the power OFF then ON then OFF again.
5. With the roller shift motor (M2) OFF (home position),check that the actuator on PS18 (roller shift HP) is correctly aligned with the cutout on the shift-unit mounting plate.

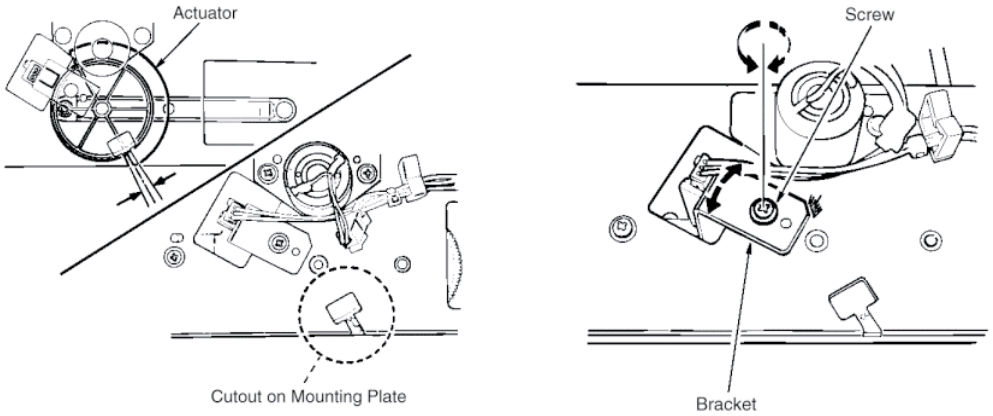


Figure 6-59. Adjustment of the Shift position

6. If the actuator is not correctly aligned with the cutout, carry out adjustment as described below.
7. Loosen the screw holding the PS18 (roller shift HP) bracket in place, and adjust the bracket position as necessary.
8. Retighten the screws.

[Assembling Procedures]

1. Reinstall the rear cover, top cover and the Cover Sheet Feeder (If installed) reversing the procedure above.

6.3.7. Adjusting the Opening/Closing at the Paper Exit

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the Top cover. (Refer to item 6.1.4 on page 6-4)
3. Remove the Cover Sheet Feeder (if installed). (Refer to item 6.2.7 on page 6-26)
4. Switch the power OFF then ON then OFF again. Then, with the paper exit closed, confirm that the paper exit casing is firmly against the stopper section.

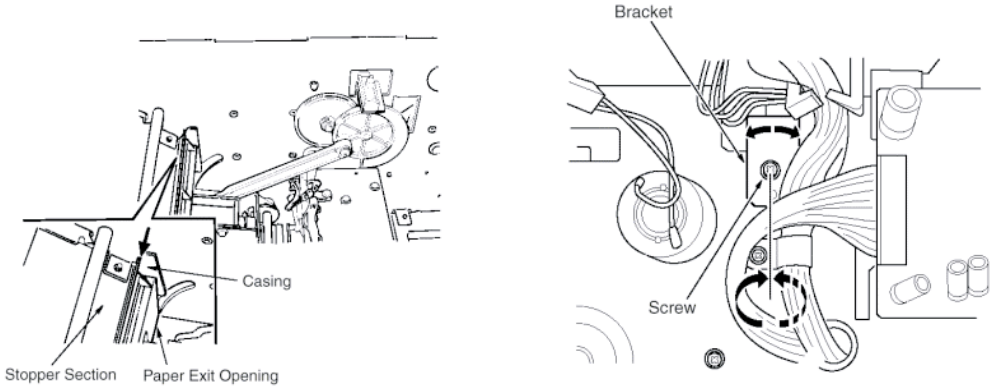


Figure 6-60. Adjustment of the Opening/Closing at the Paper Exit

5. If the casing is not in firm contact with the stopper,@carry out adjustment described as follows.
6. Loosen the set screw holding the PS12 (paper exit-opening detector) bracket in place, and adjust the bracket position as necessary.
7. Retighten the bracket set screw.

[Assembling Procedures]

1. Reinstall the rear cover, the top cover and the Cover Sheet Feeder (If installed) reversing the procedure above.

6.3.8. Adjusting the Paper Exit-Opening Solenoid

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the Top cover. (Refer to item 6.1.4 on page 6-4)
3. Remove the Cover Sheet Feeder (if installed). (Refer to item 6.2.7 on page 6-26)
4. With SD4 (paper exit-opening solenoid) ON, measure the gap between the solenoid plunger and the bracket stopper.
   Spec value for gap: A = 6.0±0.5mm.

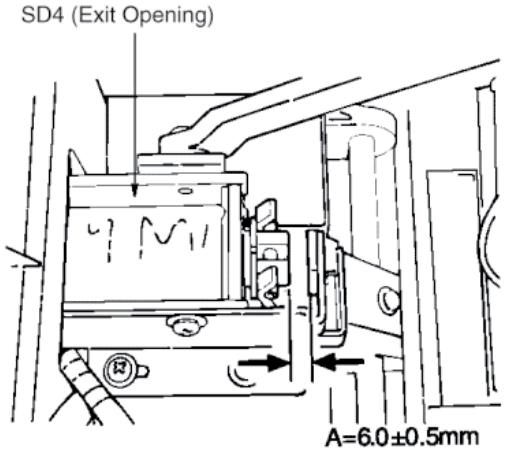


Figure 6-61. Adjustment of the Paper Exit Opening Solenoid

5. If the gap is out of spec, carry out adjustment describe as follows.
6. Remove the 2 set screws holding the solenoid bracket in place, and remove the solenoid together with the bracket.

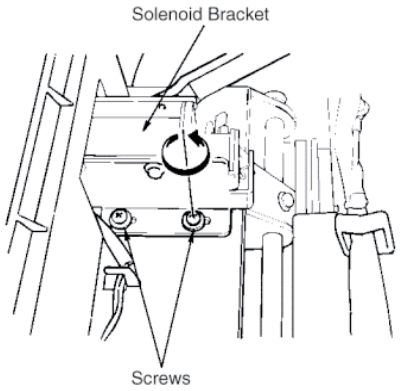


Figure 6-62. Adjustment of the Paper Exit Opening Solenoid

7. Loosen the 2 screws holding the solenoid to the bracket, and adjust the position of the solenoid.
8. Retighten the 2 solenoid screws, then replace the solenoid and bracket into their original position and screw in the 2 bracket screws.

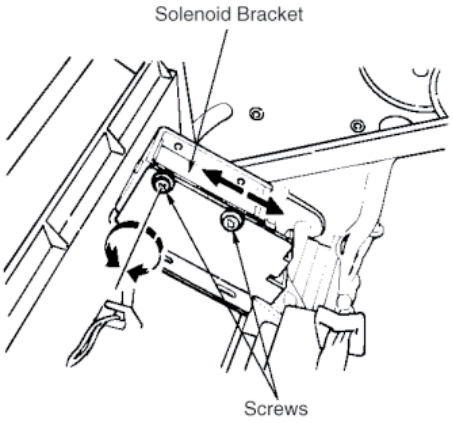


Figure 6-63. Adjustment of the Paper Exit Opening Solenoid

[Assembling Procedures]

1. Reinstall the rear cover, the top cover and the Cover Sheet Feeder (If installed) reversing the procedure above.

6.3.9. Adjusting the Paper Exit-Opening Lower Guide Plate

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Remove the Rear Cover. (Refer to item 6.1.2 on page 6-2)
2. Remove the Top cover. (Refer to item 6.1.4 on page 6-4)
3. Remove the Cover Sheet Feeder (if installed). (Refer to item 6.2.7 on page 6-26)
4. With SD4 (paper exit-opening solenoid) OFF, confirm that the paper exit-opening lower guide plate is a sufficient distance (distance A) higher than the sponge rollers.
   Spec value: A = 1.5mm and greater.

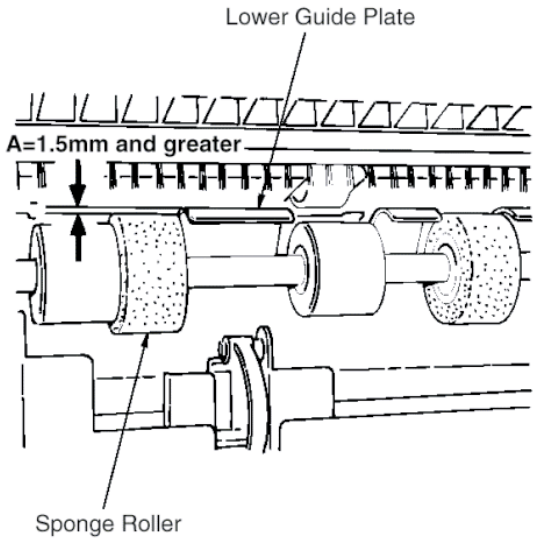


Figure 6-64. Adjustment of the Paper Exit Opening Solenoid

5. Hold down the paper exit-opening guide plate with your hand so that the paper exit roller makes contact, and check that the remaining stroke for solenoid SD4 (distance B) is within spec.
   Spec value: B = 2.5±0.5mm.

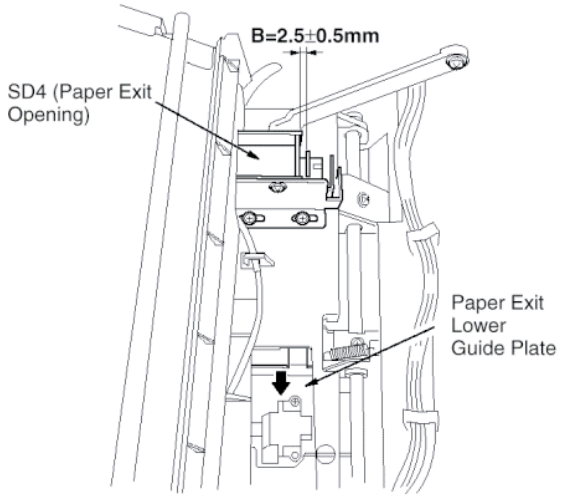


Figure 6-65. Adjustment of the Paper Exit Opening Solenoid

6. If either measurement is out of spec, carry out adjustment as described below.
7. Loosen the 2 set screws holding the solenoid bracket in place, and adjust the position of the bracket so that distances A and B are within spec.
8. Retighten the 2 bracket set screws.

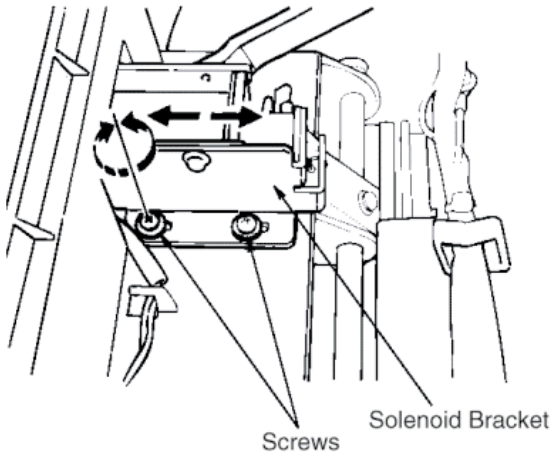


Figure 6-66. Adjustment of the Paper Exit Opening Solenoid

[Assembling Procedures]

1. Reinstall the rear cover, the top cover and the Cover Sheet Feeder (If installed) reversing the procedure above.

6.3.10. Adjusting the Tension of the Stacker Paper Exit Belt

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Push-pull gauge.

[Preparation]

1. If the belt tensioner has been loosened as a result of belt replacement or for some other reason, adjust as described below.

[Adjustment Procedures]

1. Loosen the 4 set screws (see illustration).
2. Using the push-pull gauge, pull the belt-tensioner pulley shaft so that tension A is at the value indicated below. Maintain this tension while retightening the screws. Spec value for tension: A = 2kg.

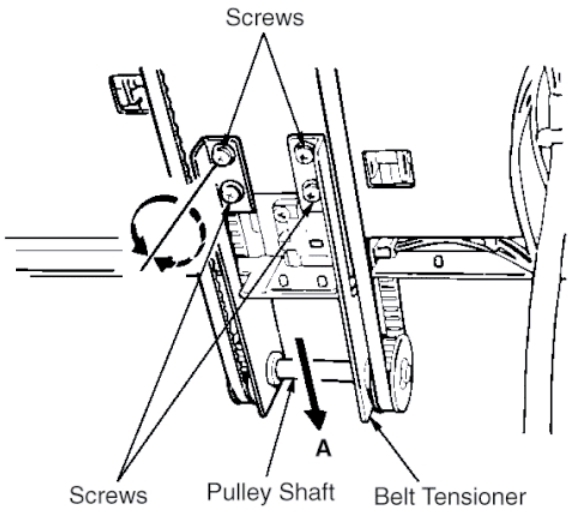


Figure 6-67. Adjustment of the Tension of the Stacker Paper Exit Belt

[Assembling Procedures]

1. Reinstall the parts above reversing the procedure above.

6.3.11. Adjusting the Mount Location of the paper Exit Arm

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Push-pull gauge.

[Adjustment Procedures]

1. Remove the screw to remove the belt detection gear.
2. When the stacker paper exit arm is at the position shown below, secure the belt detection gear with a screw with the actuator end of the belt detection gear aligned with the bottom of the square hole.

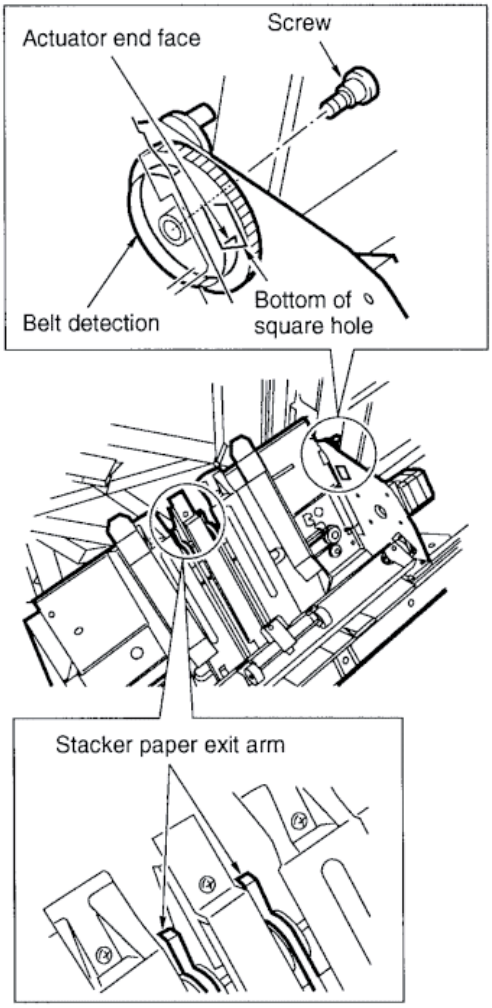


Figure 6-68. Adjustment of the Mount Location of the paper Exit Arm

6.3.12. Adjusting the Mount Location of the Upper Alignment Plates

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Adjustment Procedures]

1. Open the front cover and pull out the stacker/stapler unit.
2. Move the upper alignment plates into home position. (Move so that the actuator on the upper alignment plate drive belt is at PS8 (upper alignment plate HP).

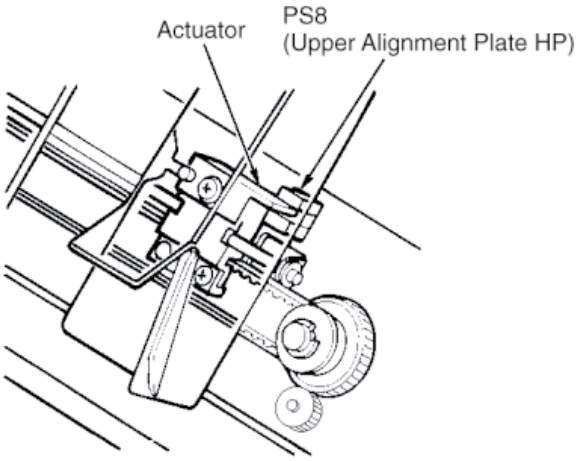


Figure 6-69. Adjustment of the Upper Alignment Plate

3. Loosen the 2 set screws fixing the upper alignment plates in place (one screw on each plate),and adjust the plates so that distances A and B are within specification.
   Spec values: A = 337±0.5mm
   B = 41.2±0.5mm
4. Retighten the screws.

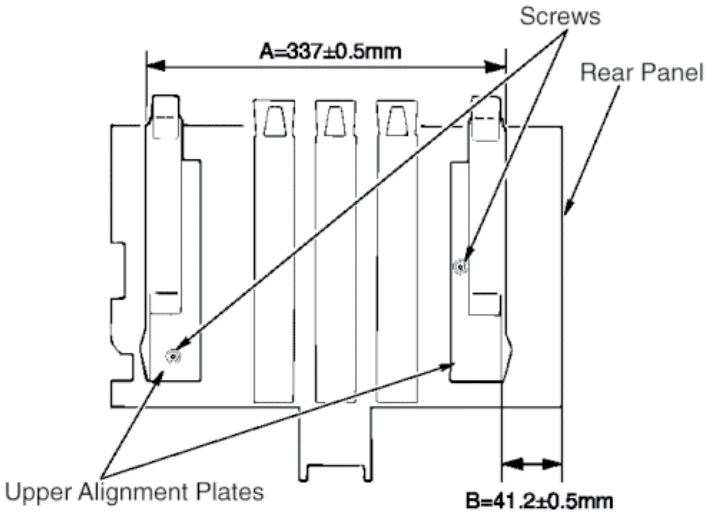


Figure 6-70. Adjustment of the Upper Alignment Plate

6.3.13. Adjusting the Tension of the Upper-Alignment-Plate Drive Timing Belt

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Preparation]

1. If the upper-alignment-plate drive belt tensioner has been loosened as a result of belt replacement or for some other reason, adjust as de-scribed below.

[Adjustment Procedures]

1. Open the front cover and pull out the stacker/stapler unit.
2. Loosen the 2 set screws (see illustration).
3. Move the belt tensioner so that the end is aligned with the center mark on the scale, and retighten the screws.

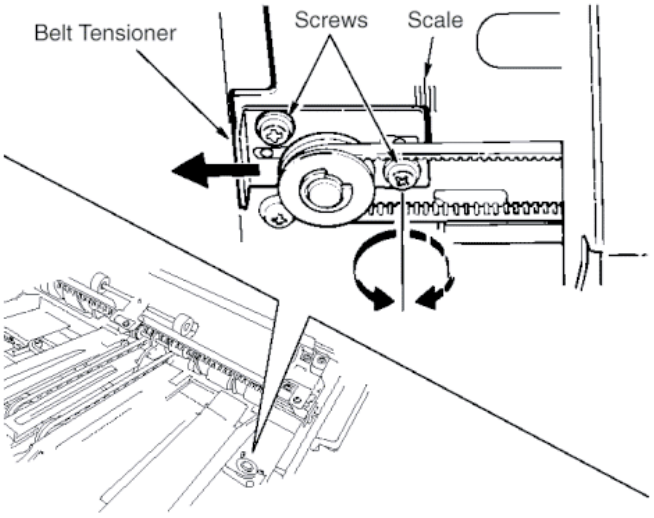


Figure 6-71. Adjustment of the Upper-Alignment-Plate Drive Timing Belt

6.3.14. Adjusting the Mount Location of the Lower Alignment Plates

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Adjustment Procedures]

1. Open the front cover and pull out the stacker/ stapler unit.
2. Move the lower alignment plates into home position.
   (Move so that the actuator on the lower-alignment-plate drive belt is at PS24 (lower-alignment-plate HP).
3. Loosen the 2 set screws fixing the lower alignment plates in place (one screw on each plate),and adjust the plates so that distances A and B are within specification.
   Spec values: A = 337±0.5mm
   B = 40.4±0.5mm
4. Retighten the screws.

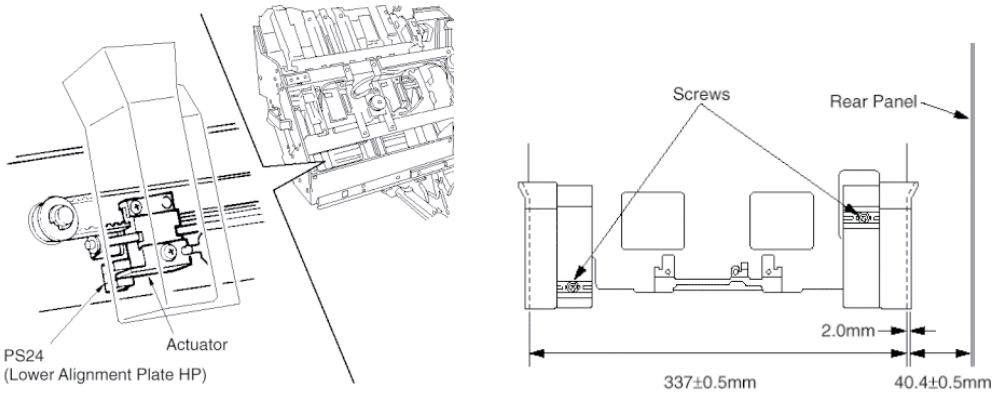


Figure 6-72. Adjustment of the Mount Location of the Lower Alignment Plates

6.3.15. Adjusting the Tension of the Lower-Alignment-Plate Drive Timing Belt

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Preparation]

1. If the lower-alignment-plate drive belt tensioner has been loosened as a result of belt replacement or for some other reason, adjust as de-scribed below.

[Adjustment Procedures]

1. Loosen the 2 set screws (see illustration).
2. Move the belt tensioner so that the end is aligned with the center mark on the scale, and retighten the screws.

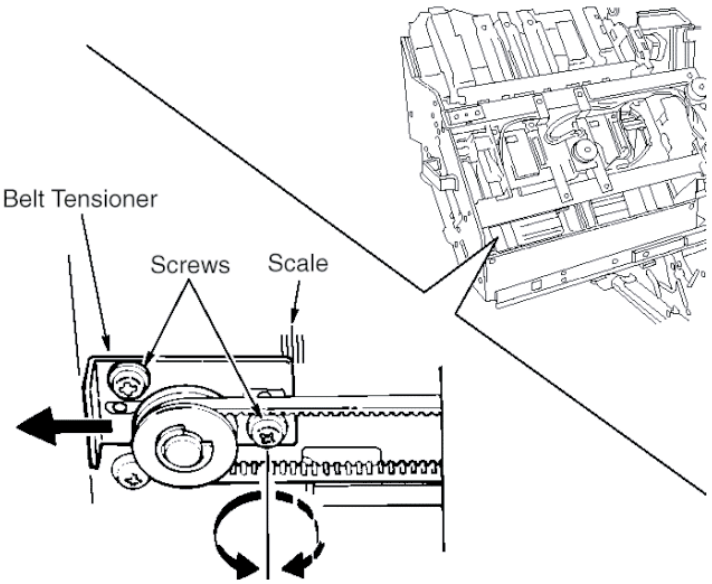


Figure 6-73. Adjustment of the Tension of the Lower-Alignment-Plate Drive Timing Belt

6.3.16. Adjusting the Stapling Position (Flat Stapling)

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Scale.

[Preparation]

1. Check whether the virtual line running between the stoppers is parallel to the virtual line between the staplers.
2. If the lines are not parallel or if you need to change the stapling position, carry out adjustment as described below.

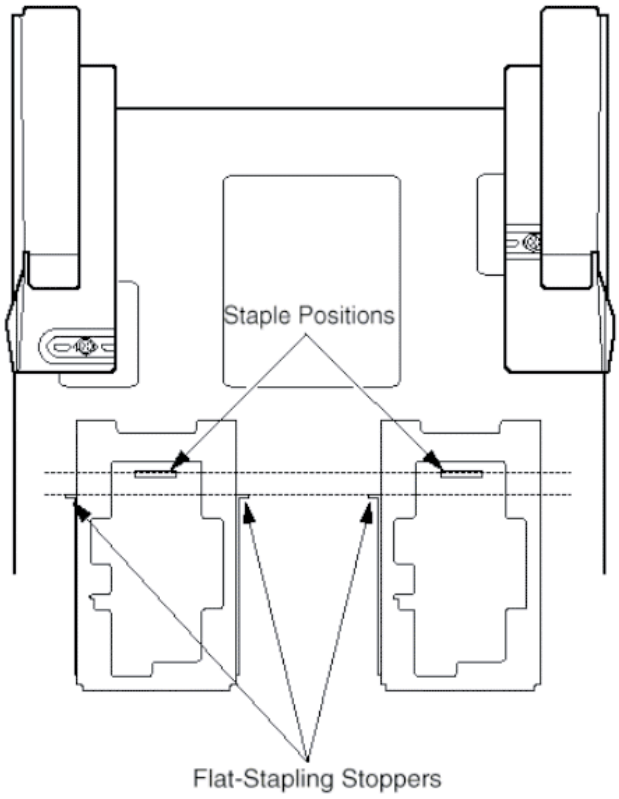


Figure 6-74. Adjustment of the Stapling Position (Flat Stapling)

[Adjustment Procedures]

1. Loosen the 3 set screws holding the flat-stapling stopper bracket in place, and position the bracket so that distance A is within the specification range.
   Spec range: A = 5.5 to 11.5mm
   (initial value = 8.5mm)
2. Hold paper against the stoppers and confirm that all three stoppers are in alignment.
3. Execute stapling to confirm that the stopper line and stapler line are parallel.

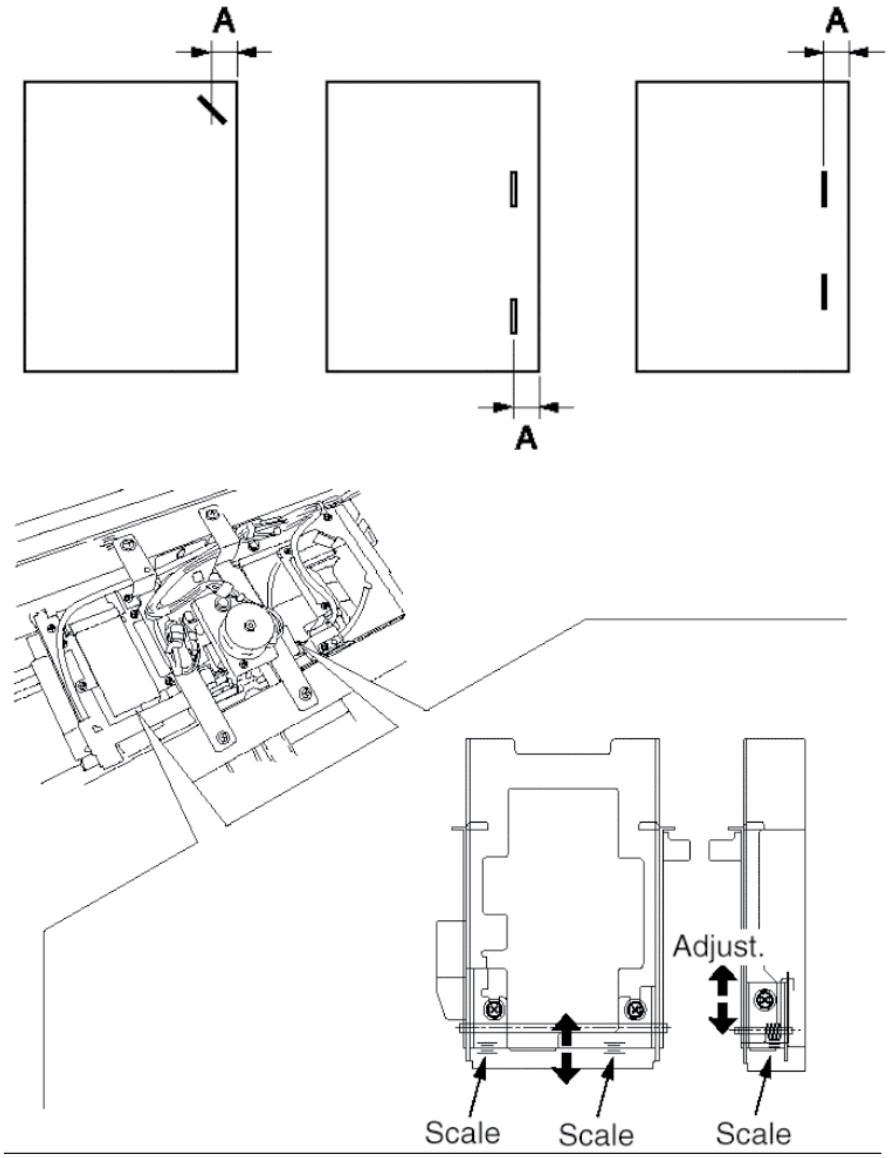


Figure 6-75. Adjustment of the Stapling Position (Flat Stapling)

6.3.17. Adjusting the Stapler Vertical Positioning

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Jig.

[Preparation]

1. When replacing or reinstalling a stapler or clincher, adjust the vertical alignment as de-scribed below.

[Adjustment Procedures]

1. If installing a stapler, mount the stapler into place.
2. Loosely fasten the clincher in place with 4 set screws. (If the clincher is already fastened in place, loosen the 4 screws so that you can adjust it.)
3. Remove the plate from the jig.
4. Remove the cartridge, and install the plate that you took from the jig.
5. Reinstall the cartridge.

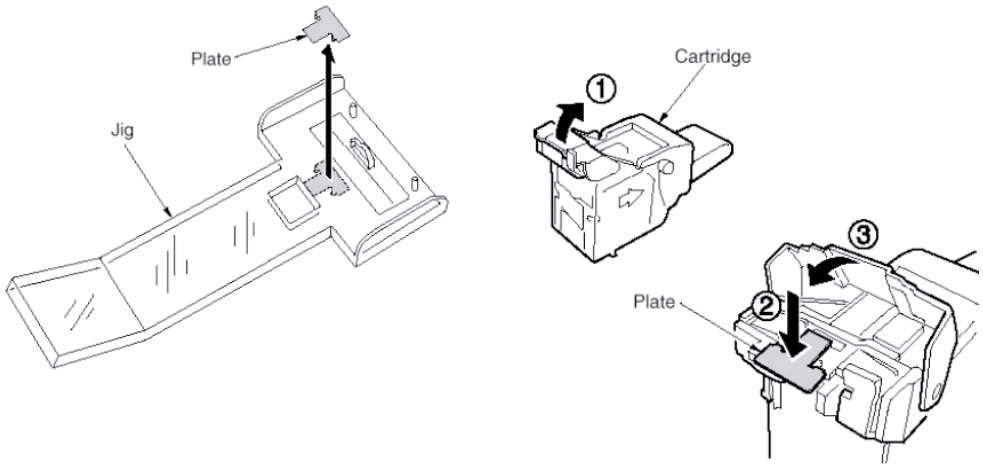


Figure 6-76. Adjustment of the Stapler Vertical Positioning

6. Fit the two pegs on the jig into the corresponding holes in the clincher.

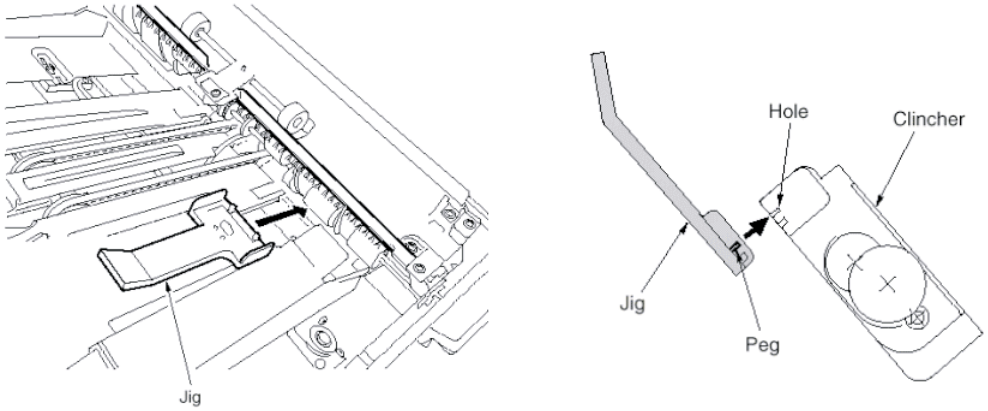


Figure 6-77. Adjustment of the Stapler Vertical Positioning

7. Rotate the stapler gears downward. Adjust the clincher position so that the plate on the cartridge fits smoothly into the groove on the jig.
8. With the plate in the groove, tighten the 4 clincher set screws to fasten the clincher into place.
9. Rotate the stapler gears back upwards, and remove the jig.
10. Remove the plate from the cartridge and set it back into the jig.
11. Reinstall the cartridge and check that stapling operates correctly.

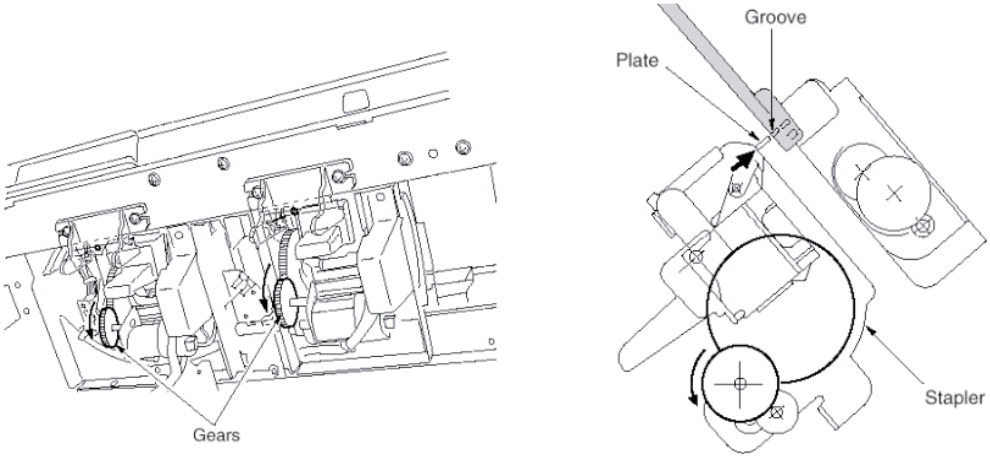


Figure 6-78. Adjustment of the Stapler Vertical Positioning

6.3.18. Adjusting the Staple Orientation (Stapling-and-Folding)

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver.

[Preparation]

1. If the staple orientation is not parallel with the paper edge, adjust as described below.

[Adjustment Procedures]

1. Open the front cover and pull the stacker/stapler unit part of the way out.
2. Remove the 2 rail-stopper screws. Then pull the stacker/stapler unit all of the way out.

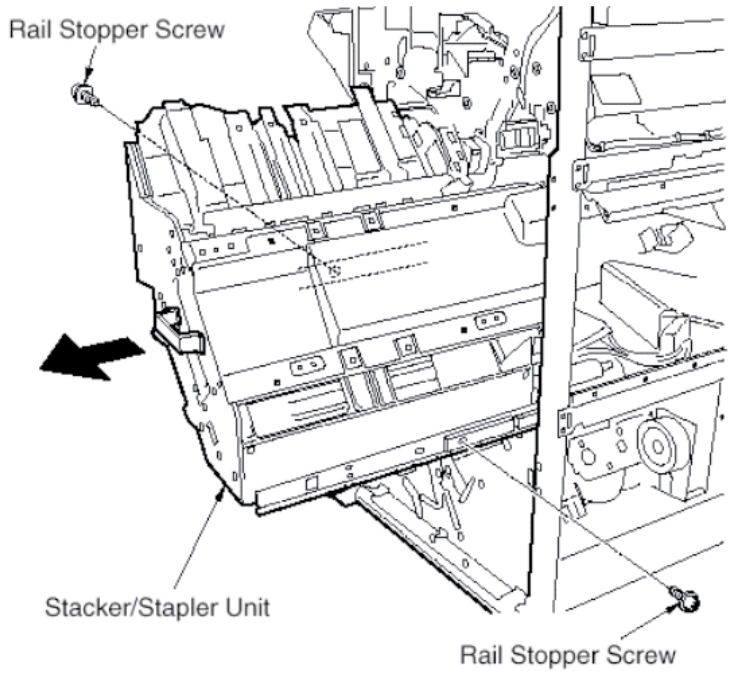


Figure 6-79. Adjustment of Staple Orientation (Stapling-and-Folding)

3. Remove the 4 set screws holding the cover in place, and remove the cover.

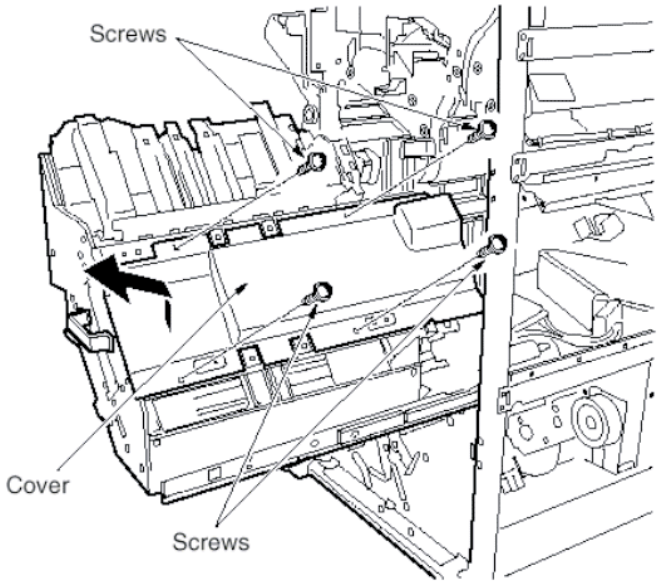


Figure 6-80. Adjustment of Staple Orientation (Stapling-and-Folding)

4. Loosen 4 more set screws.
5. Rotate the stapling-and-folding stopper assembly as necessary to adjust the alignment.
6. Retighten the screws.

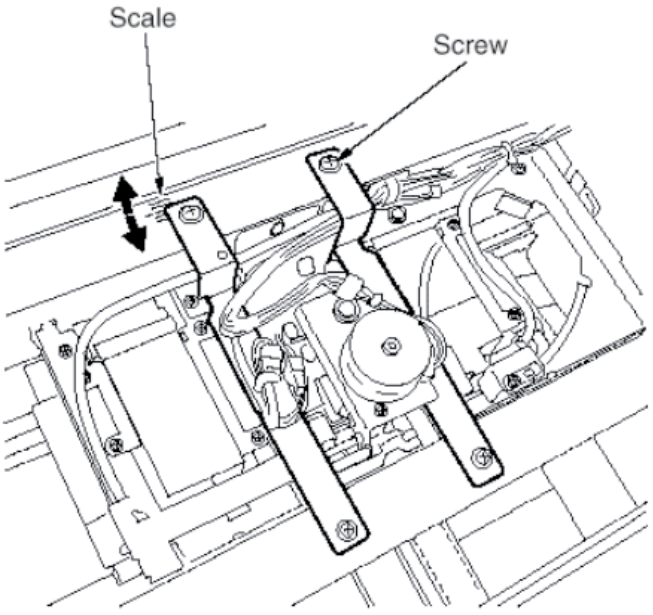


Figure 6-81. Adjustment of Staple Orientation (Stapling-and-Folding)

6.3.19. Adjusting the Angle of the Folding Stopper

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, stubby screwdriver.

[Preparation]

1. Connect the finisher to the main body.
2. Load A3 paper into the main body.
3. Remove the paper exit-guide-plate adjustment cover.

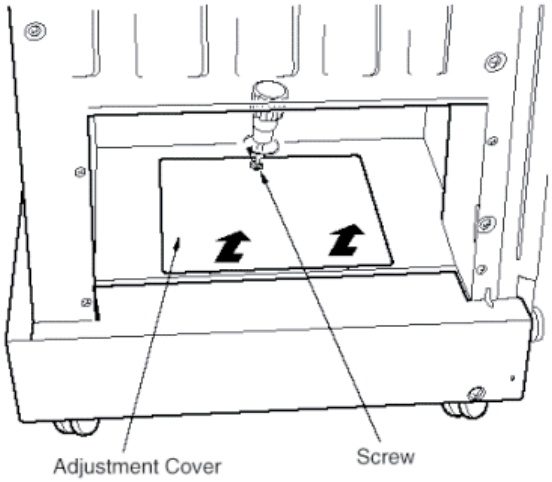


Figure 6-82. Adjustment of the Folding Stopper

4. Check whether the following conditions hold.
   - Check that the fold line (the folding stopper) is perpendicular to the conveyance direction.
   - Check that the fold side discrepancy (for A3 paper) is within the limit. Limit: A = 1mm
5. If either or both of the above conditions does not hold, adjust as described below.

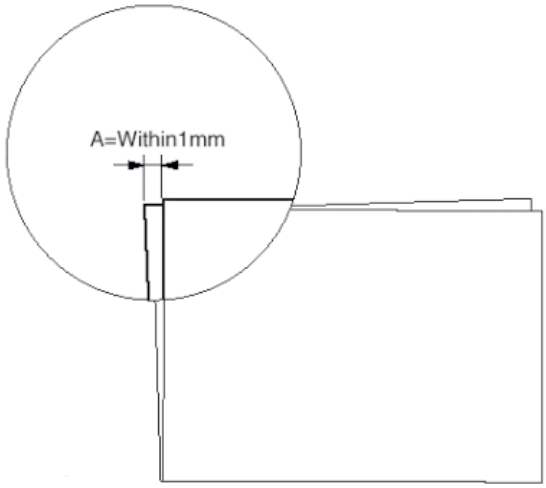


Figure 6-83. Adjustment of the Folding Stopper

[Adjustment Procedures]

1. Take a fold sample using A3 paper.
2. Check the discrepancy along the folded set's trailing edge, and use this information to judge the direction and amount by which the stopper angle must be corrected.
3. Loosen the 2 front set screws holding the stopper in place, and adjust the stopper angle by rotating around the rear screw.
4. Retighten the 2 front screws.
5. Take another sample and check the discrepancy.
6. Repeat steps (3) and (4) until the discrepancy is within the specified limit.
7. Replace the adjustment cover.

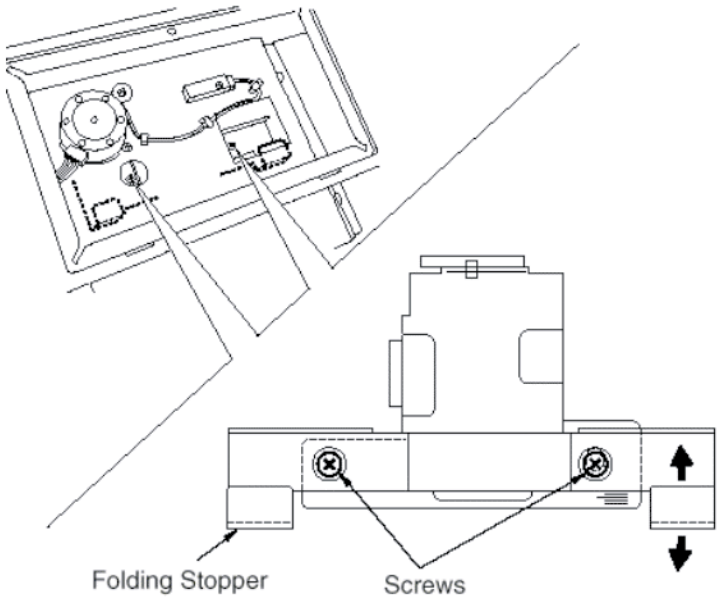


Figure 6-84. Adjustment of the Folding Stopper

6.3.20. Adjusting the Tension of the Stapler Movement Timing Belt

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Push pull scale.

[Preparation]

1. If the belt tensioner has become loose as a result of belt replacement or for some other reason, adjust as described below.

[Adjustment Procedures]

1. Loosen the 2 screws holding the tensioner in place.
2. Using a push pull scale, pull the belt tensioner so that tension A is at the value indicated below. Maintain this tension while re-tightening the screws.
   Spec value for tension: A = 1.5±0.5kg

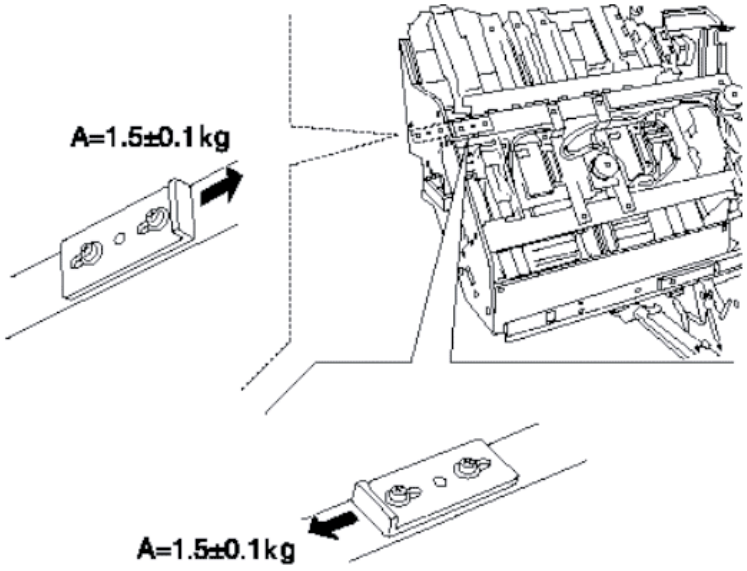


Figure 6-85. Adjustment of the Tension of the Stapler Movement Timing Belt

6.3.21. Adjusting the Tension of the Stapler-Rotation Timing Belt

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: +Screwdriver, Push pull scale.

[Preparation]

1. If the belt tensioner has been loosened as a result of belt replacement or for some other reason, adjust as described below.

[Adjustment Procedures]

1. Loosen the 2 screws holding the tensioner in place.
2. Using a push pull scale, pull the belt tensioner so that tension A is at the value indicated below. Maintain this tension while re-tightening the screws.
   Spec value for tension: A = 0.75±0.05kg

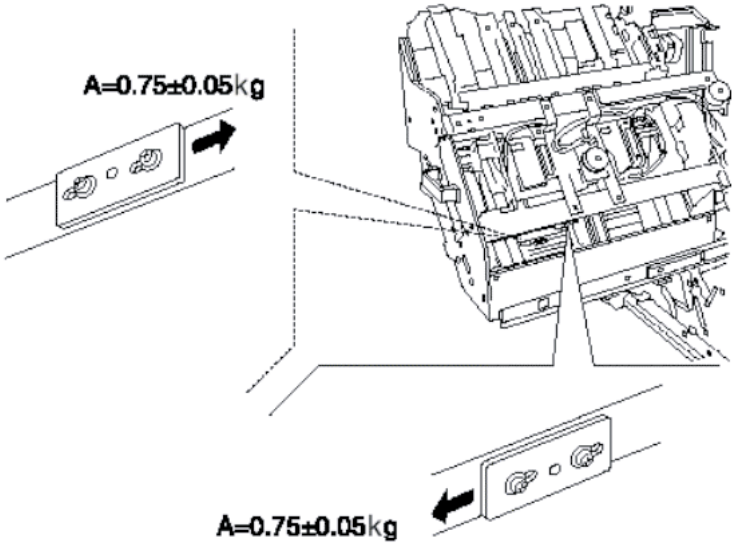


Figure 6-86. Adjustment of the Tension of the Stapler-Rotation Timing Belt

6.3.22. Adjusting the Folding Force

CAUTION:
Be sure to turn OFF the MAIN AC POWER prior to performing the maintenance.

Applicable jigs and tools: Pliers.

[Preparation]

1. If necessary, you can change the force of the folding and pressure rollers as described below.

CAUTION:
If changing the forces, be sure to make the same change for all rollers at the same time.

[Adjustment Procedures]

1. Let the springs as illustrated below; a pressure spring on the folding roller, and a fold spring on the pressure roller.
   Force: If A = 8.5kgf
   If B = 11.4kgf
   If C = 14.4kgf

CAUTION:
Be sure to attach the springs into like-labeled holes (either A, or B, or C).

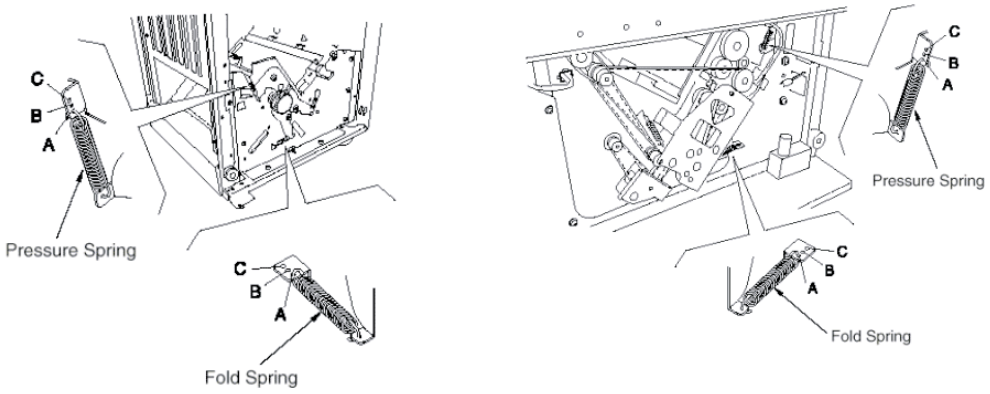


Figure 6-87. Adjustment of the Folding Force

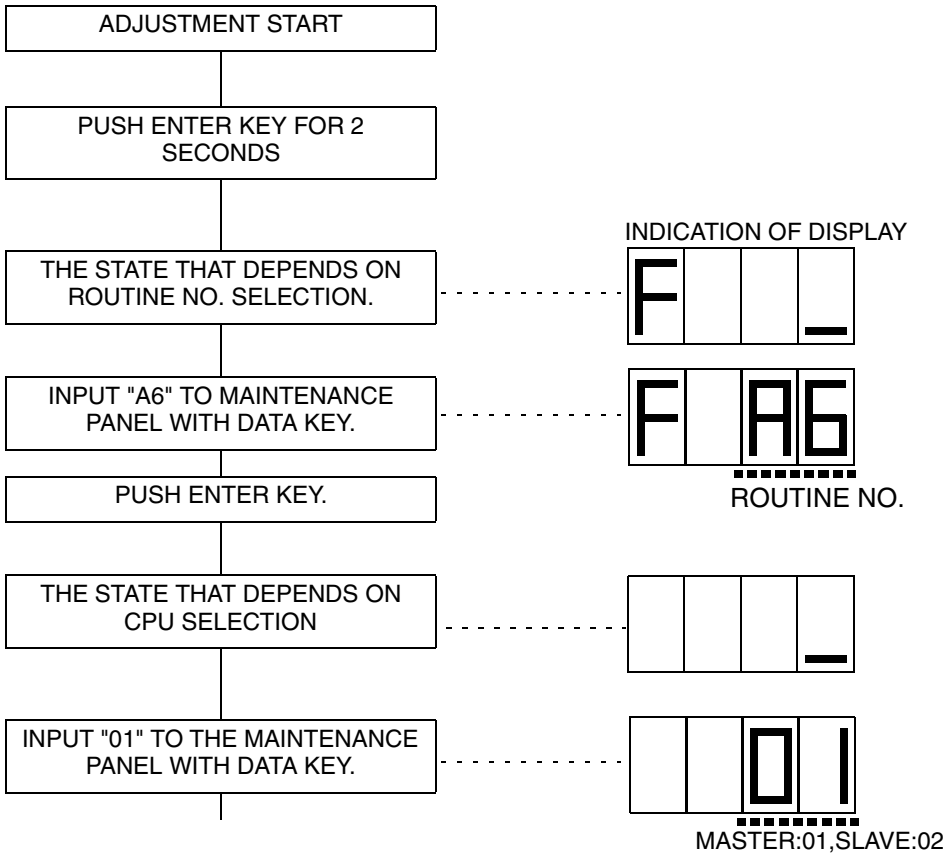
6.3.23. Adjusting the Stapling-and-Folding stopper (Stapling position)

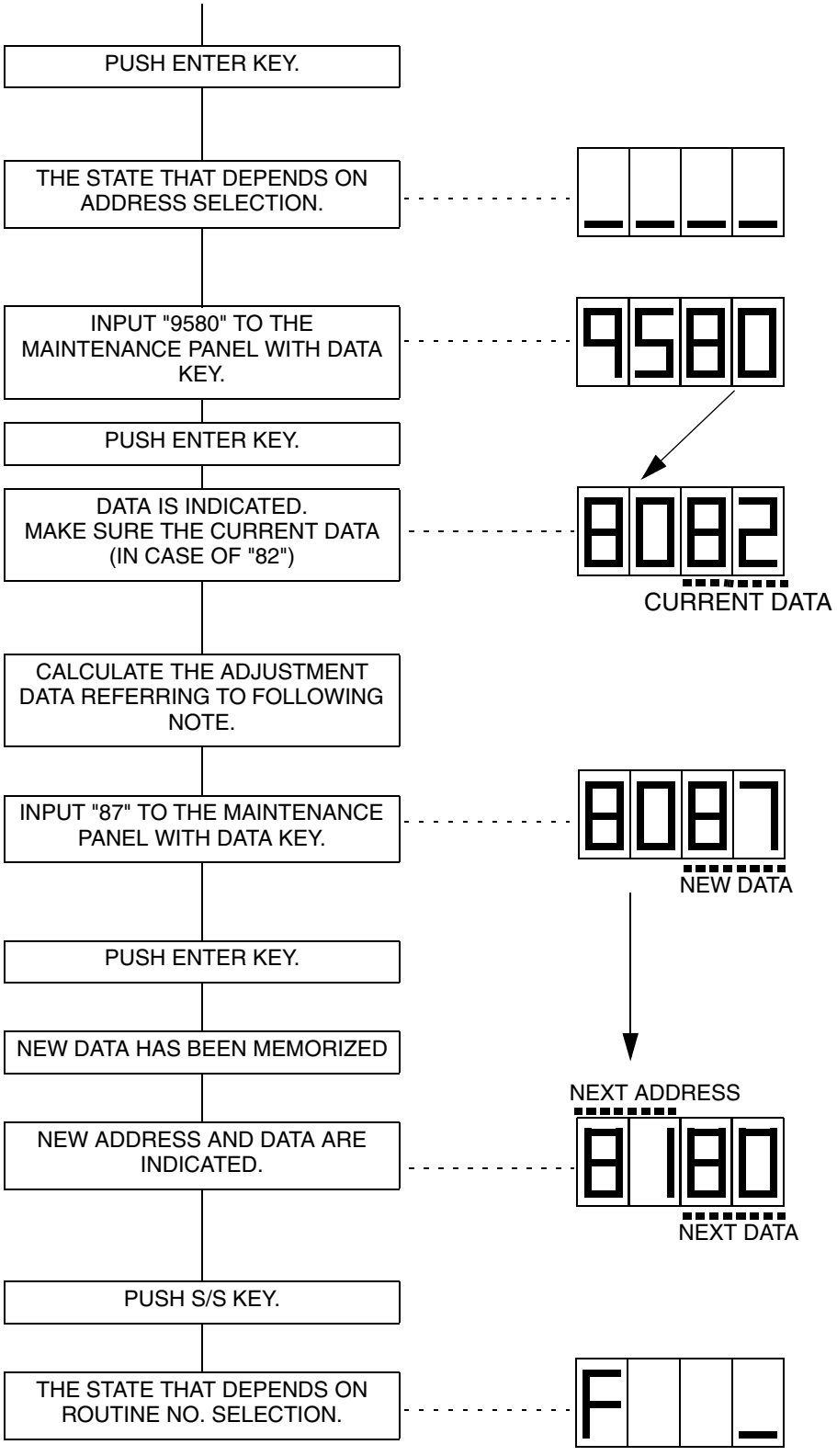
The Engine has the Adjustment value of the Stapling-and-Folding Stopper position on the memory shown below. For details of relation for adjustment value and data, refer to “SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position”.
The position can be changed if you rewritethe Adjustment data by the Maintenance Panel.

Stapling-and-Folding Stopper position data		
Paper size	**Address**	**Default**
Letter_SEF	9580	80HEX
B4_SEF	9581	80HEX
A4_SEF	9582	80HEX
A3_SEF	9583	80HEX
Legal14_SEF	9584	80HEX
Ledger_SEF	9585	80HEX
Others	9586	80HEX

For Example

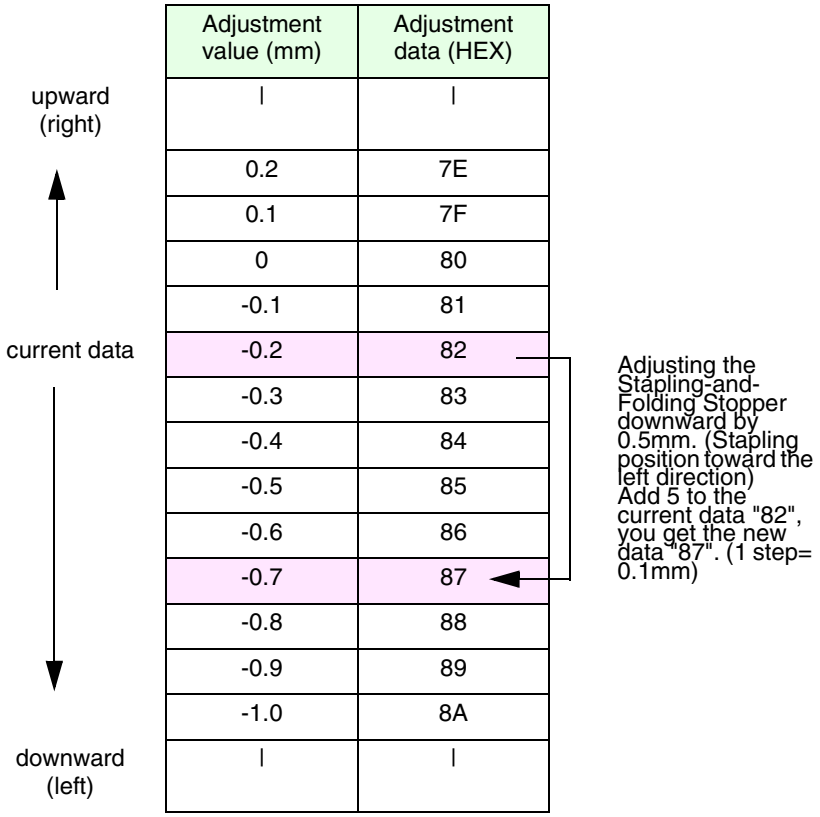
Adjusting the Stapling-and-Folding Stopper downward by 0.5mm from the current position in case of Letter_SEF paper.
Execute the following procedure by the Maintenance Panel referring to “SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position”.
After this procedure the Stapling position is adjusted toward the left direction by 0.5mm from the former position.


ADJUSTMENT START
PUSH ENTER KEY FOR 2 SECONDS
THE STATE THAT DEPENDS ON ROUTINE NO. SELECTION.
INDICATION OF DISPLAY
F _
INPUT "A6" TO MAINTENANCE PANEL WITH DATA KEY.
F A6
ROUTINE NO.
PUSH ENTER KEY.
THE STATE THAT DEPENDS ON CPU SELECTION
_
INPUT "01" TO THE MAINTENANCE PANEL WITH DATA KEY.
0 1
MASTER:01,SLAVE:02


PUSH ENTER KEY.
THE STATE THAT DEPENDS ON ADDRESS SELECTION.
INPUT "9580" TO THE MAINTENANCE PANEL WITH DATA KEY.
9580
PUSH ENTER KEY.
DATA IS INDICATED. MAKE SURE THE CURRENT DATA (IN CASE OF "82")
8082
CURRENT DATA
CALCULATE THE ADJUSTMENT DATA REFERRING TO FOLLOWING NOTE.
INPUT "87" TO THE MAINTENANCE PANEL WITH DATA KEY.
8087
NEW DATA
PUSH ENTER KEY.
NEW DATA HAS BEEN MEMORIZED
NEXT ADDRESS
NEW ADDRESS AND DATA ARE INDICATED.
8 180
NEXT DATA
PUSH S/S KEY.
THE STATE THAT DEPENDS ON ROUTINE NO. SELECTION.
F

Confirm the stapling position to execute TEST PRINT after adjustment.
If the stapling position is not correct, adjust again.

Note: How to calculate (extract of "SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position")


upward
(right)
current data
downward
(left)
Adjusting the Stapling-and-Folding Stopper downward by 0.5mm. (Stapling position toward the left direction)
Add 5 to the current data "82", you get the new data "87". (1 step= 0.1mm)

Adjustment value (mm)	Adjustment data (HEX)
I	I
0.2	7E
0.1	7F
0	80
-0.1	81
-0.2	82
-0.3	83
-0.4	84
-0.5	85
-0.6	86
-0.7	87
-0.8	88
-0.9	89
-1.0	8A
I	I

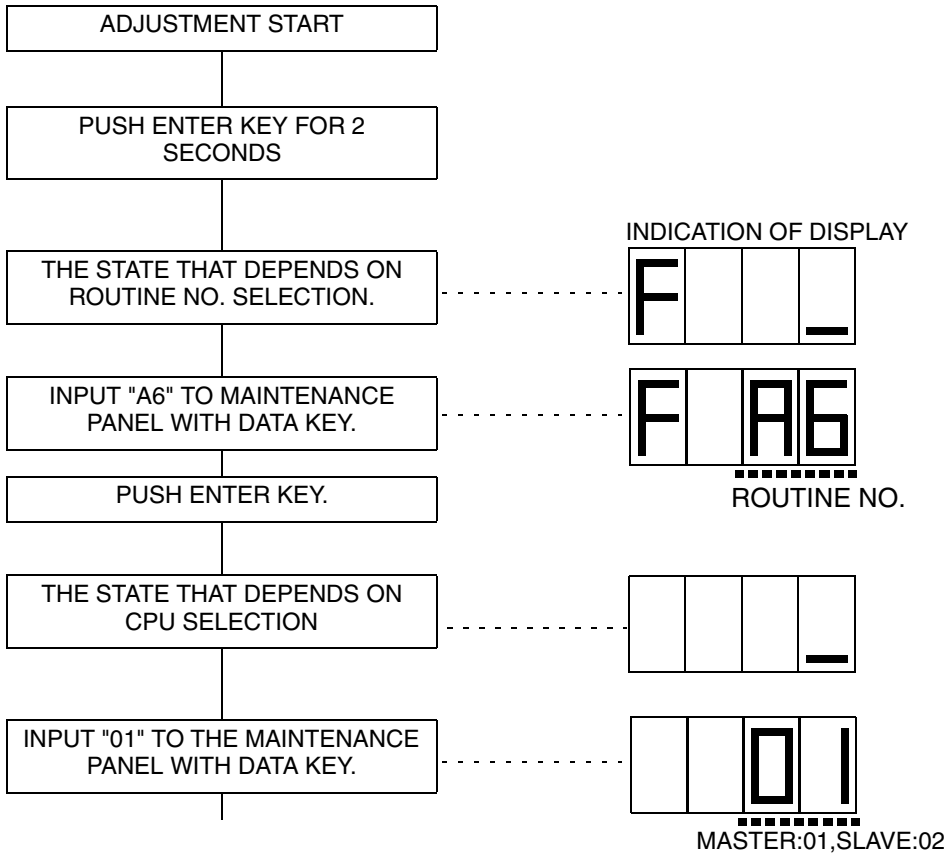
6.3.24. Adjusting the Folding stopper (folding position)

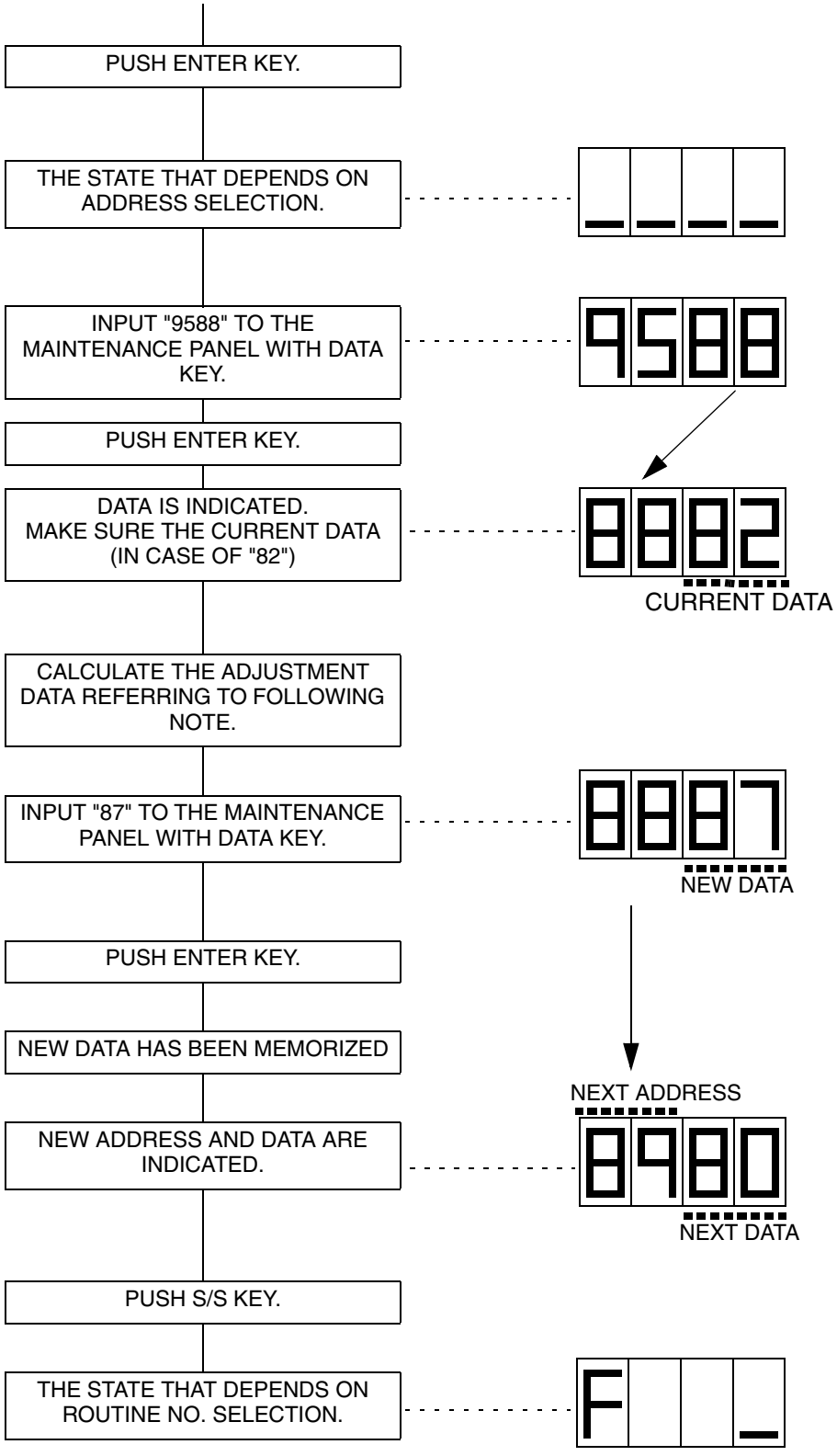
The Engine has the Adjustment value of the Folding Stopper position on the memory shown below. For details of relation for adjustment value and data, refer to “SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position”.
The position can be changed if you rewritethe Adjustment data by the Maintenance Panel.

Folding Stopper position data		
Paper size	**Address**	**Default**
Letter_SEF	9588	80HEX
B4_SEF	9589	80HEX
A4_SEF	958A	80HEX
A3_SEF	958B	80HEX
Legal14_SEF	958C	80HEX
Ledger_SEF	958D	80HEX
Others	958E	80HEX

For Example

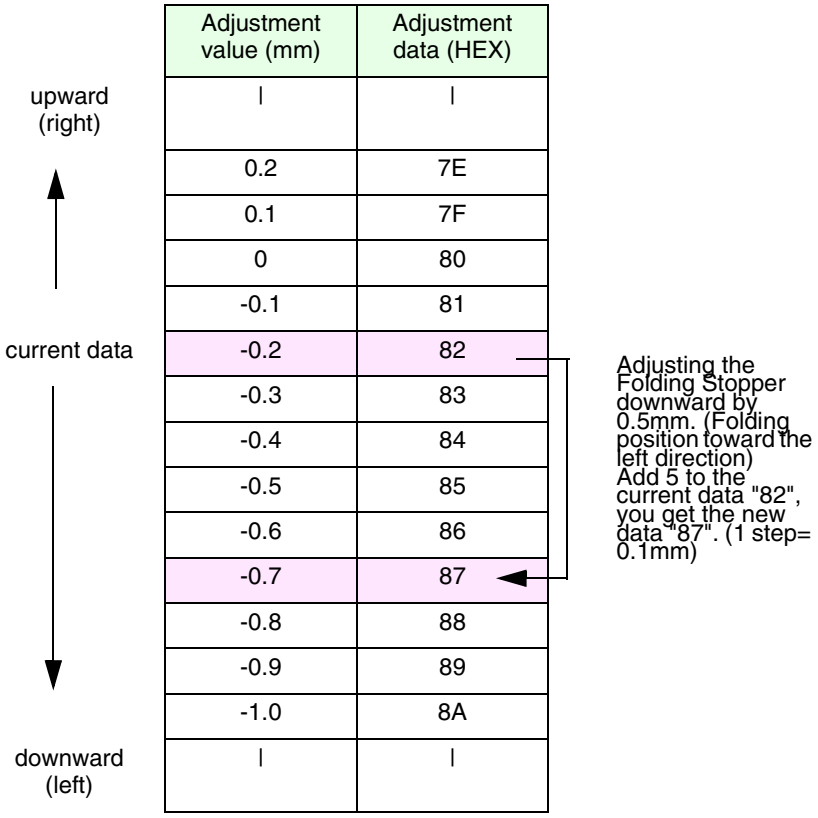
Adjusting the Folding Stopper downward by 0.5mm from the current position in case of Letter_SEF paper.
Execute the following procedure by the Maintenance Panel referring to “SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position”.
After this procedure the Folding position is adjusted toward the left direction by 0.5mm from the former position.


ADJUSTMENT START
PUSH ENTER KEY FOR 2 SECONDS
THE STATE THAT DEPENDS ON ROUTINE NO. SELECTION.
INDICATION OF DISPLAY
F _
INPUT "A6" TO MAINTENANCE PANEL WITH DATA KEY.
F A6
PUSH ENTER KEY.
ROUTINE NO.
THE STATE THAT DEPENDS ON CPU SELECTION
_
INPUT "01" TO THE MAINTENANCE PANEL WITH DATA KEY.
0 1
MASTER:01,SLAVE:02


PUSH ENTER KEY.
THE STATE THAT DEPENDS ON ADDRESS SELECTION.
INPUT "9588" TO THE MAINTENANCE PANEL WITH DATA KEY.
PUSH ENTER KEY.
DATA IS INDICATED. MAKE SURE THE CURRENT DATA (IN CASE OF "82")
CURRENT DATA
CALCULATE THE ADJUSTMENT DATA REFERRING TO FOLLOWING NOTE.
INPUT "87" TO THE MAINTENANCE PANEL WITH DATA KEY.
NEW DATA
PUSH ENTER KEY.
NEW DATA HAS BEEN MEMORIZED
NEXT ADDRESS
NEW ADDRESS AND DATA ARE INDICATED.
NEXT DATA
PUSH S/S KEY.
THE STATE THAT DEPENDS ON ROUTINE NO. SELECTION.

Confirm the folding position to execute TEST PRINT after adjustment.
If the foldng position is not correct, adjust again.

Note: How to calculate (extract of "SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position")


upward
(right)
current data
downward
(left)
Adjusting the Folding Stopper downward by 0.5mm. (Folding position toward the left direction) Add 5 to the current data "82", you get the new data "87". (1 step= 0.1mm)

Adjustment value (mm)	Adjustment data (HEX)
I	I
0.2	7E
0.1	7F
0	80
-0.1	81
-0.2	82
-0.3	83
-0.4	84
-0.5	85
-0.6	86
-0.7	87
-0.8	88
-0.9	89
-1.0	8A
I	I

Chapter 7. Theory of Operation

7.1. Center Cross Section

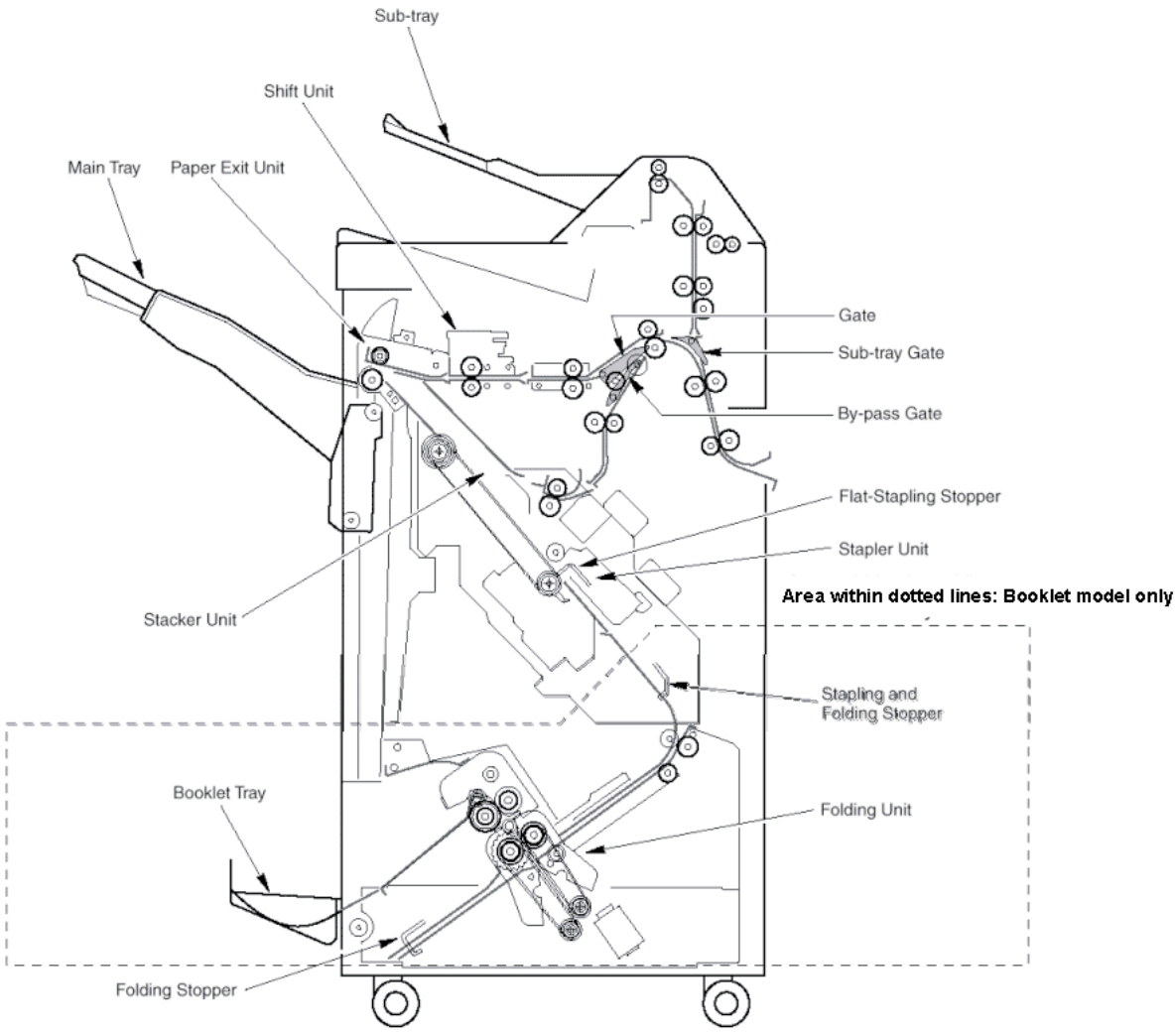


Figure 7-1. View of the center Cross Section of the Finisher

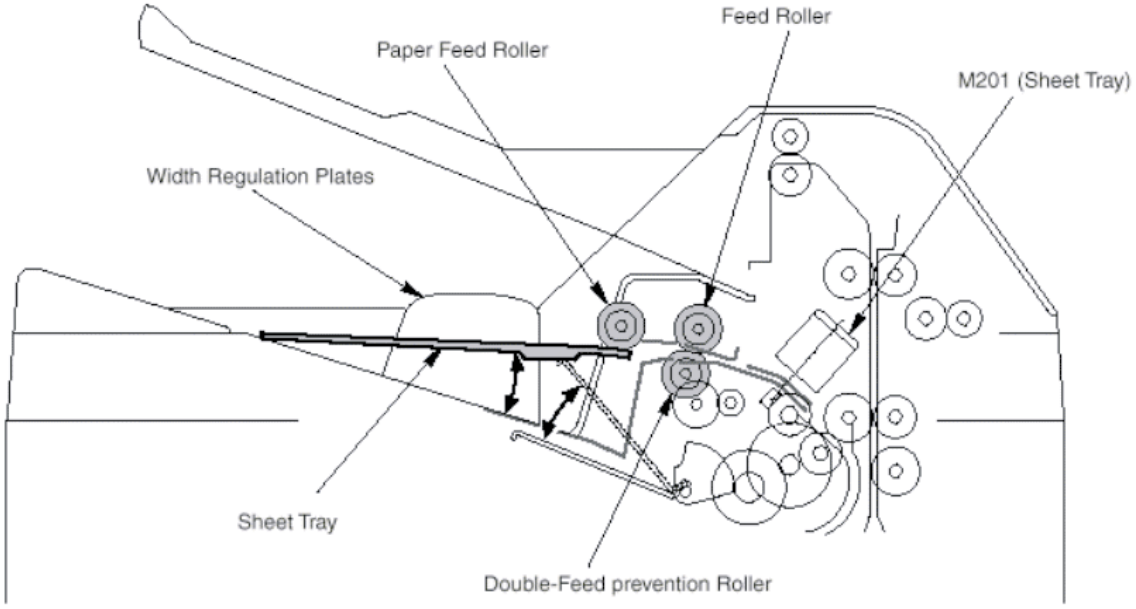


Figure 7-2. View of the center Cross Section of the Finisher

7.2. Drive System Diagram

7.2.1. Paper Conveyance Drive

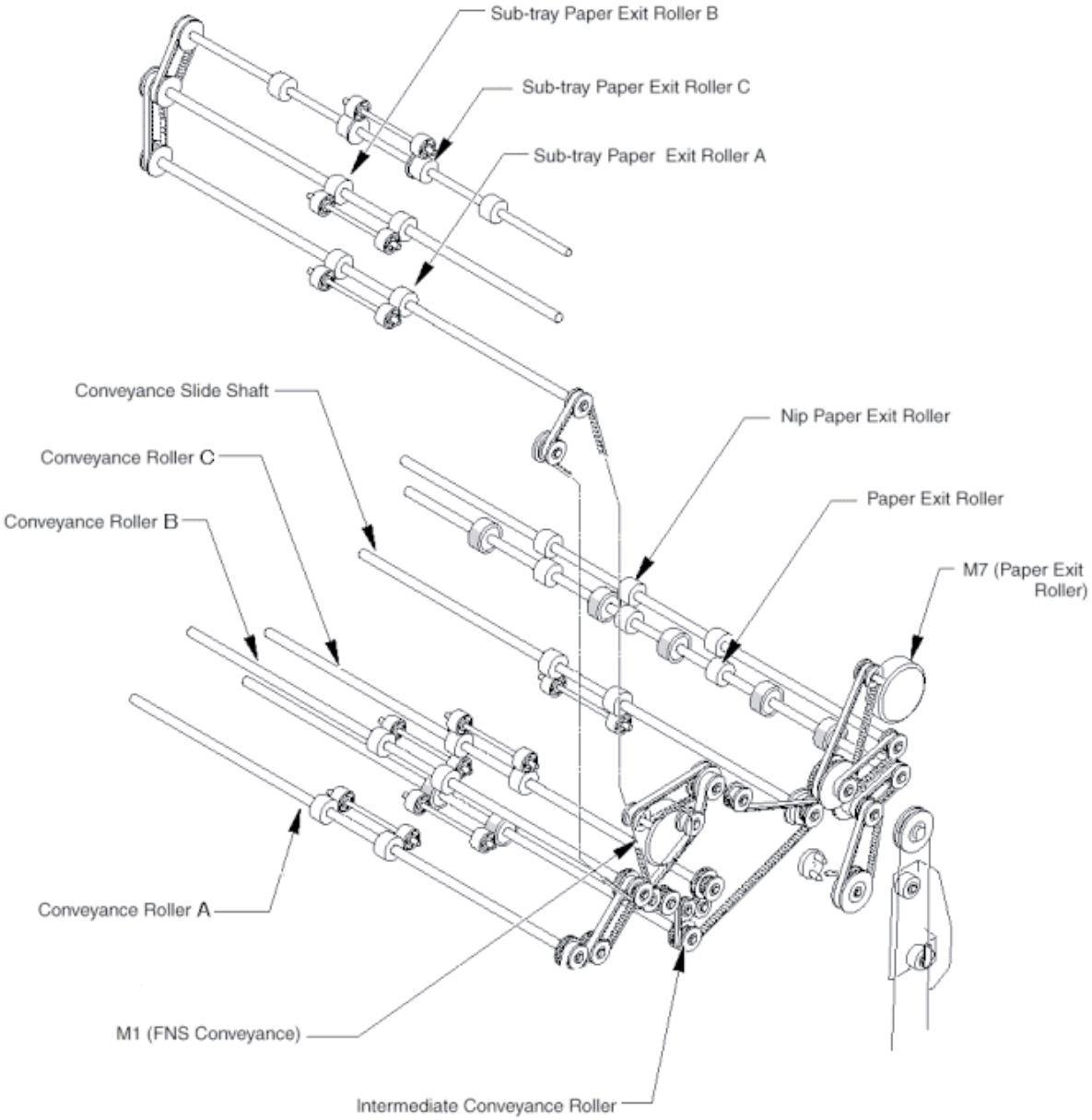


Figure 7-3. View of Paper Conveyance Drive

7.2.2. Stacker Drive

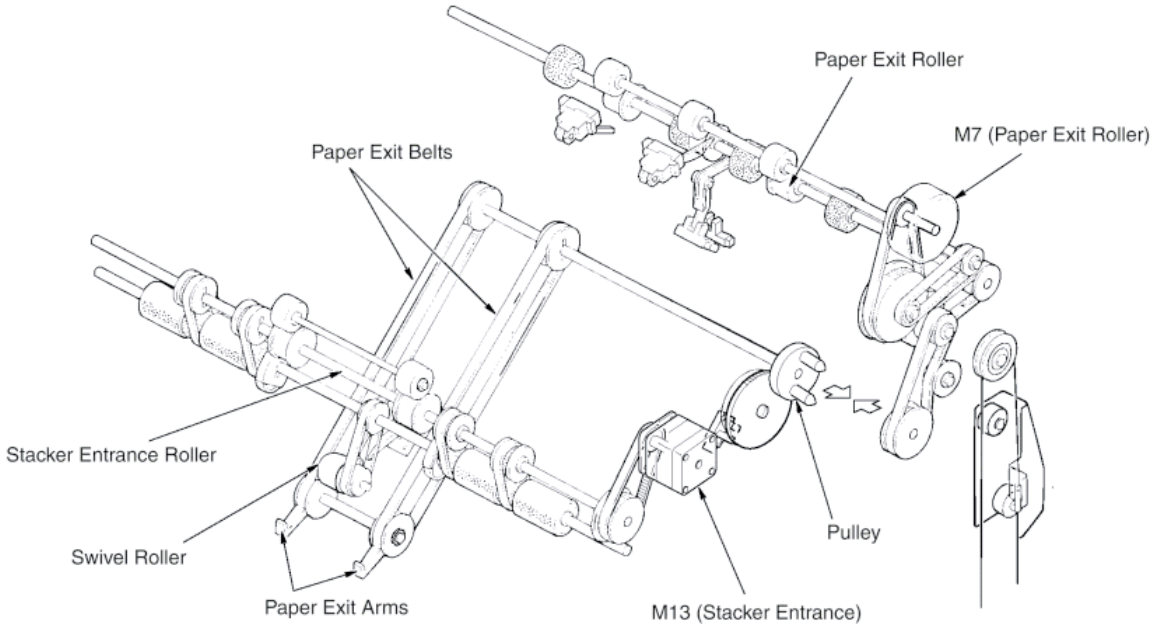


Figure 7-4. View of Stacker Drive

7.2.3. Folding Drive

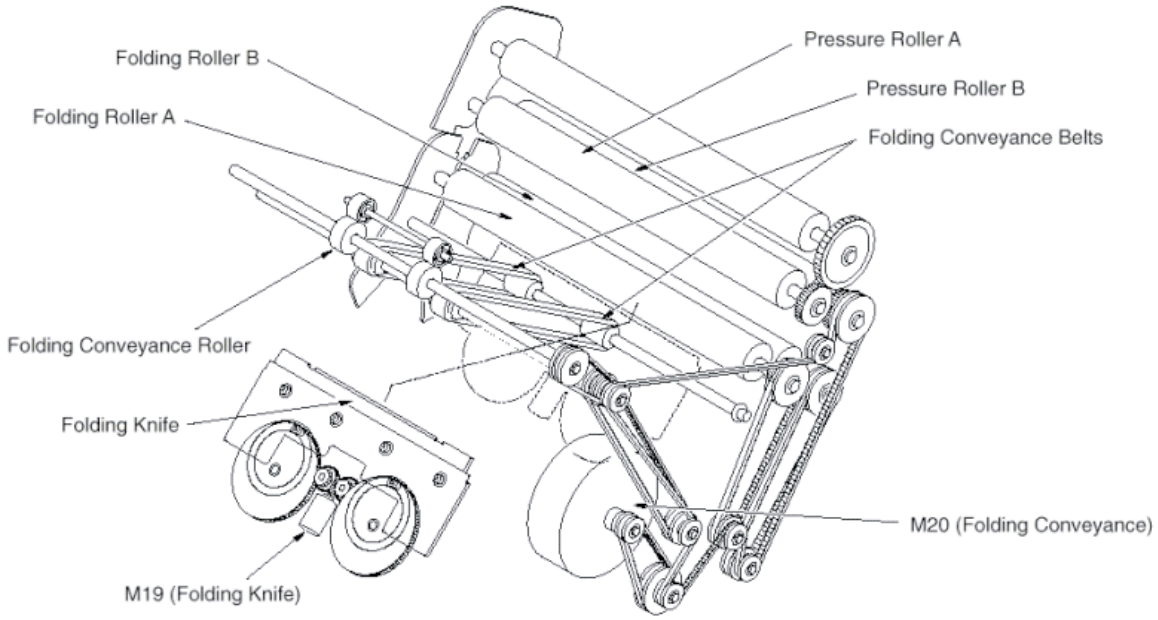
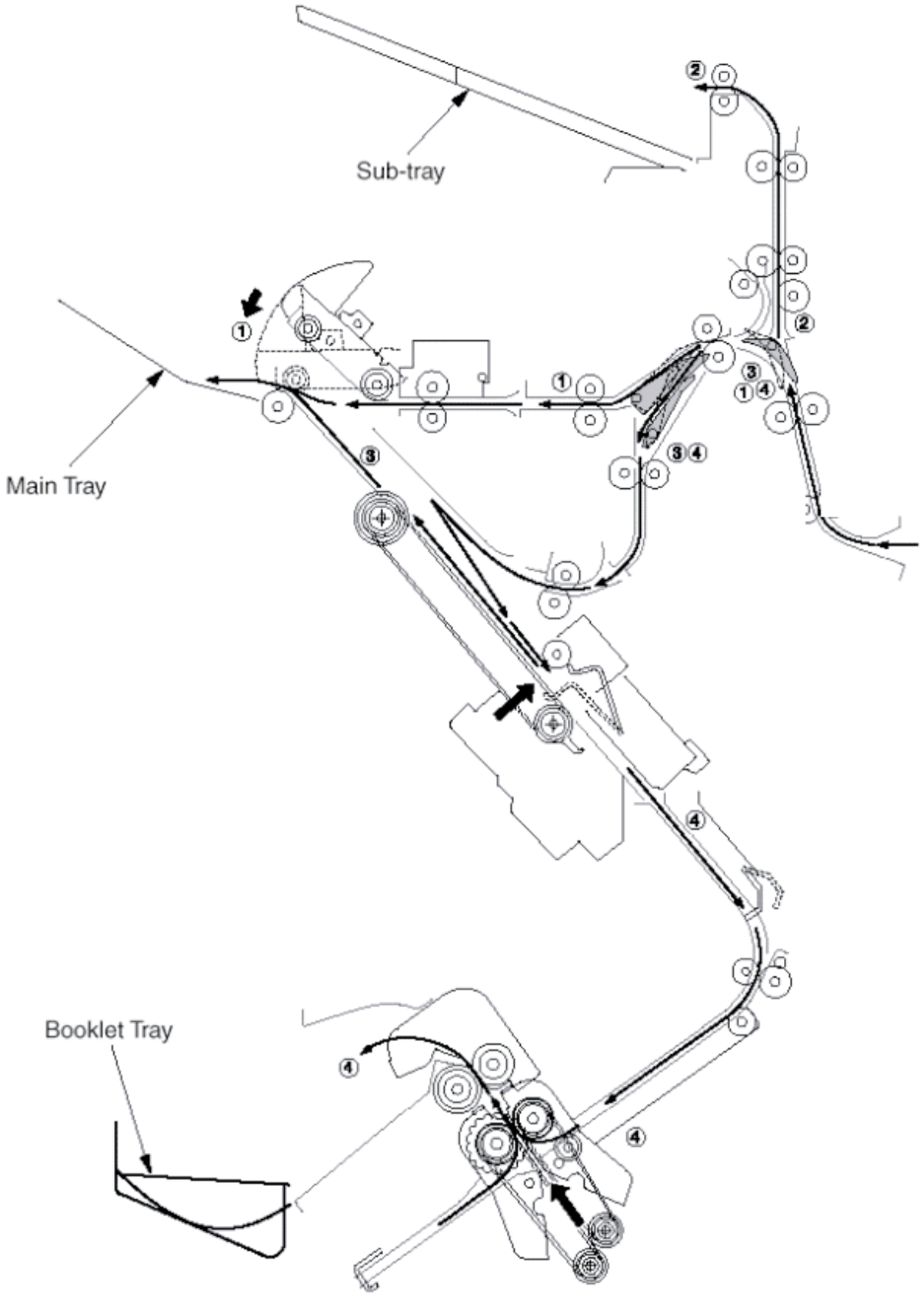


Figure 7-5. View of Folding Drive

7.3. Paper Conveyance Path

7.3.1. Paper Conveyance Path



Finishing	Paper Conveyance Paths
Sort, Group, Non-sort mode	①
Sub-tray mode	②
Staple mode	③
Booklet mode (FS-108BM only)	④

Figure 7-6. Paper Conveyance Path

7.3.2. Offset Mode

A paper exited from the printer is conveyed and exited to the main tray. This mode has offset function that allows each paper sets to be exited with a paper shifted 30mm to the rear by the conveyance slide shaft of the shift unit.

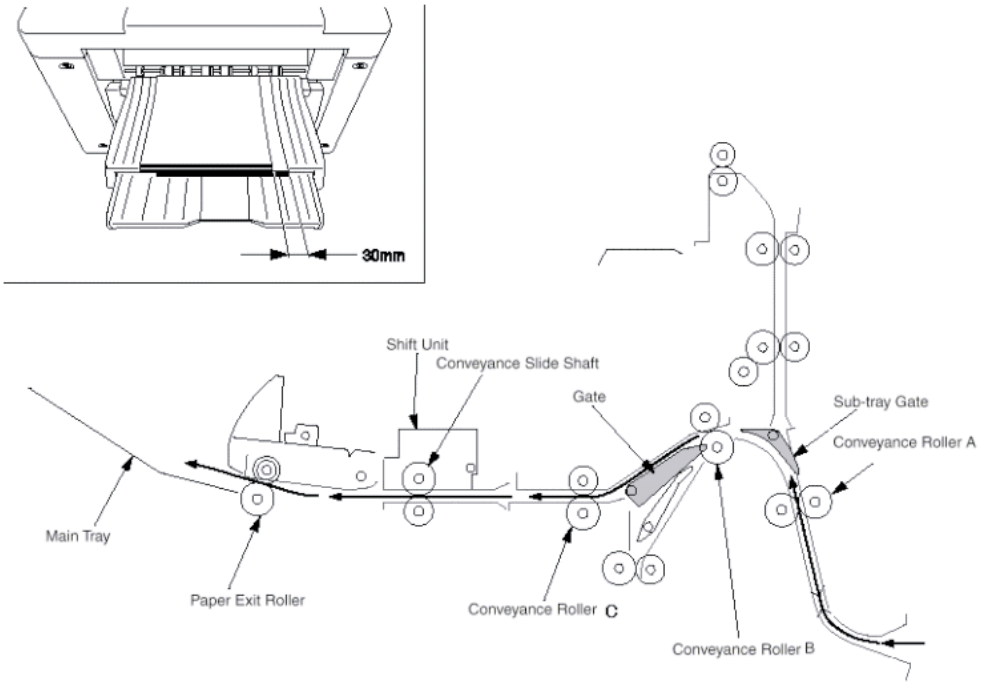


Figure 7-7. View of the Offset Mode

7.3.3. Non-staple Mode

Exit to main tray

A paper exited from the printer is conveyed and exited to the main tray.

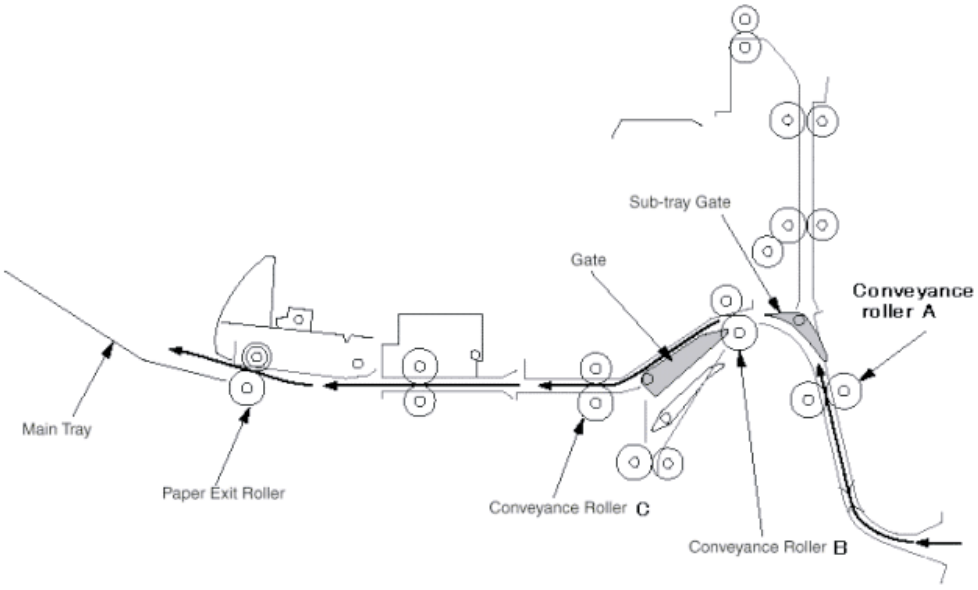


Figure 7-8. View of the Non-staple Mode

7.3.4. Sub-tray Exit Mode

The sub-tray gate opens. Paper exited from the printer is conveyed and exited to the sub-tray.

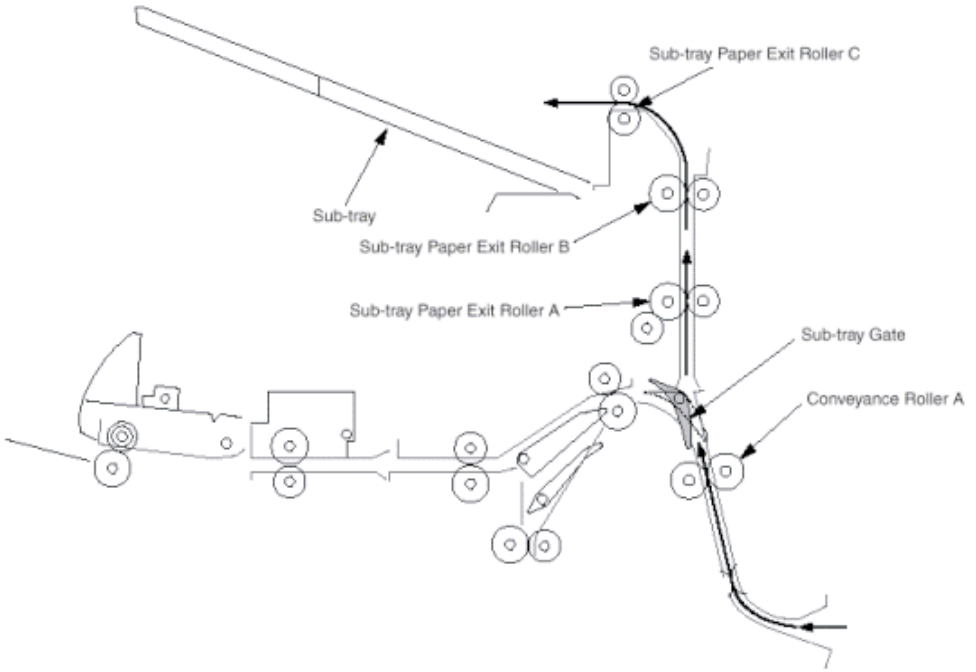


Figure 7-9. View of the Sub-tray Exit Mode

7.3.5. Staple Mode

(1.) The gate switches to the staple mode.

(2.) For A4R paper and above, the paper exit opening opens.

(3.) The first set of paper is conveyed and stacked.

1.) The stacker section roller sends the paper to the flat-stapling stopper and the paper is lined up in the lengthwise direction.

2.) The upper alignment plate lines up paper in the widthwise direction.

3.) Paper is stapled.

4.) The first set is conveyed by the paper exit arm and exited to the main tray.

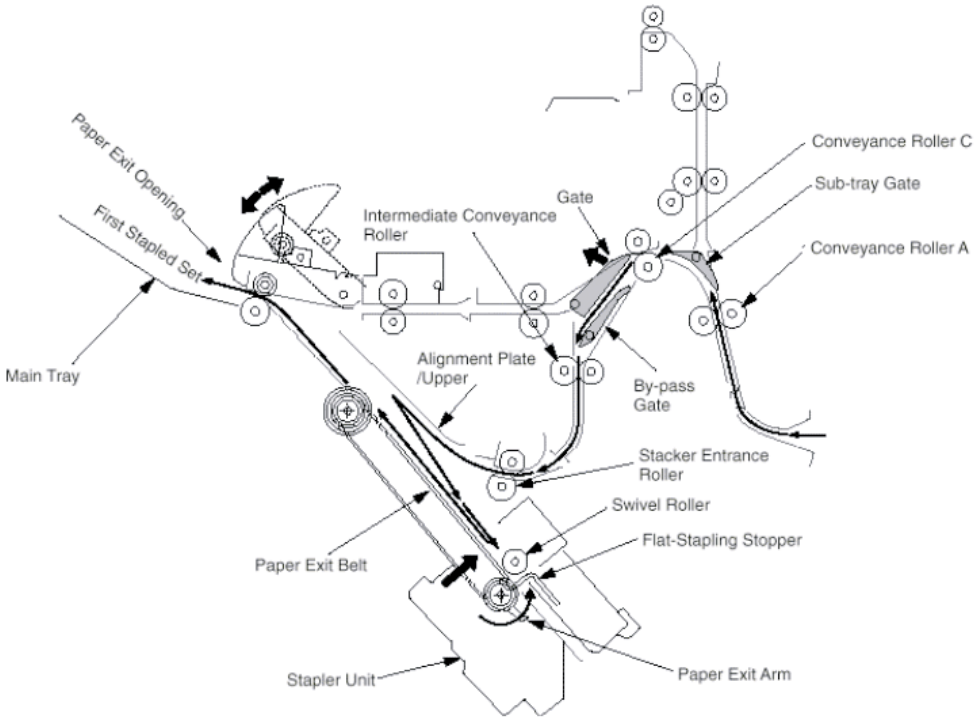


Figure 7-10. View of the Staple Mode

(4.) The second and subsequent sets of paper are conveyed and stacked.

1.) The first page stops in the stacker entrance with the by-pass gate opened. The stacker entrance roller stops to wait for the previous stack to be exited.

2.) The by-pass gate is closed and the second page is stacked on top of the first.

3.) Once the previous stack has exited, the stack entrance roller rotates and the first and second pages are simultaneously sent to the stacker.

* The above steps (1) to (3) are for paper to a maximum of A4 size.

4.) The stacker section roller sends the paper to the flat-stapling stopper and the paper is lined up in the lengthwise direction.

5.) The upper alignment plate lines up paper in the widthwise direction.

6.) When all paper is conveyed to the stacker, the paper is stapled.

7.) The second and subsequent sets are conveyed by the paper exit arm and the paper is exited to the main tray.

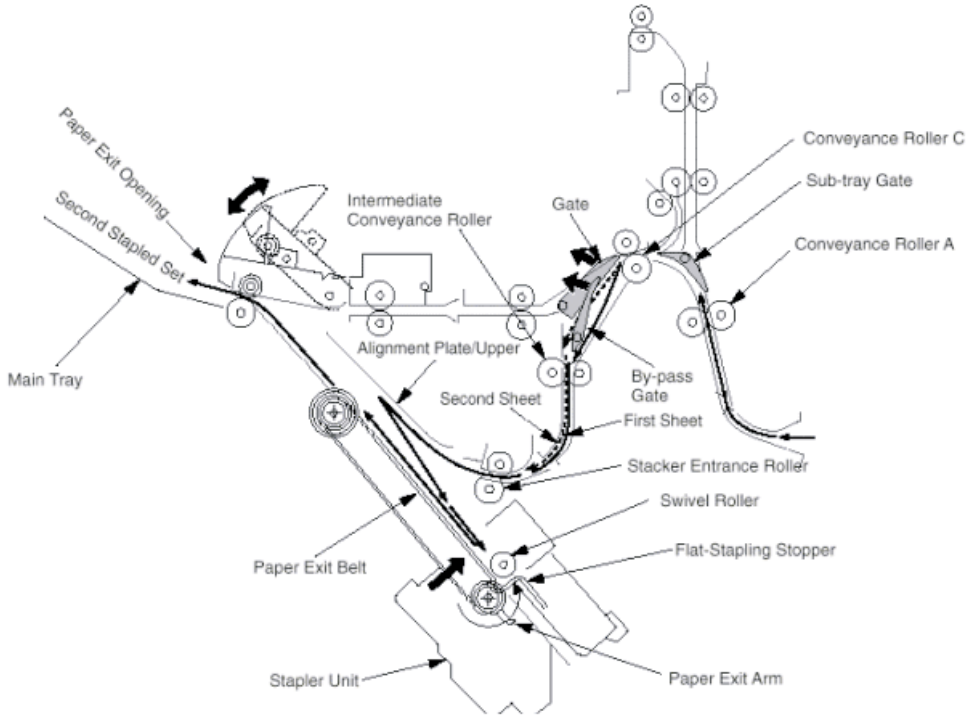


Figure 7-11. View of the Staple Mode

7.3.6. Booklet Mode

(1.) The gate switches to the staple mode.

(2.) The paper exit opening opens.

(3.) The paper is conveyed and stacked.

(4.) The stacker section roller sends the paper to the stapling-and-folding stopper and the paper is lined up in the lengthwise direction.

(5.) The upper and lower alignment plate lines up paper in the widthwise direction.

(6.) If stapling-and-folding has been selected, staple the stack.

(7.) Release the stapling-and-folding stopper and convey the stack to the folding unit by the paper exit belt.

(8.) Convey the stack up to the folding stopper, fold it with the folding knife, and eject to the booklet tray.

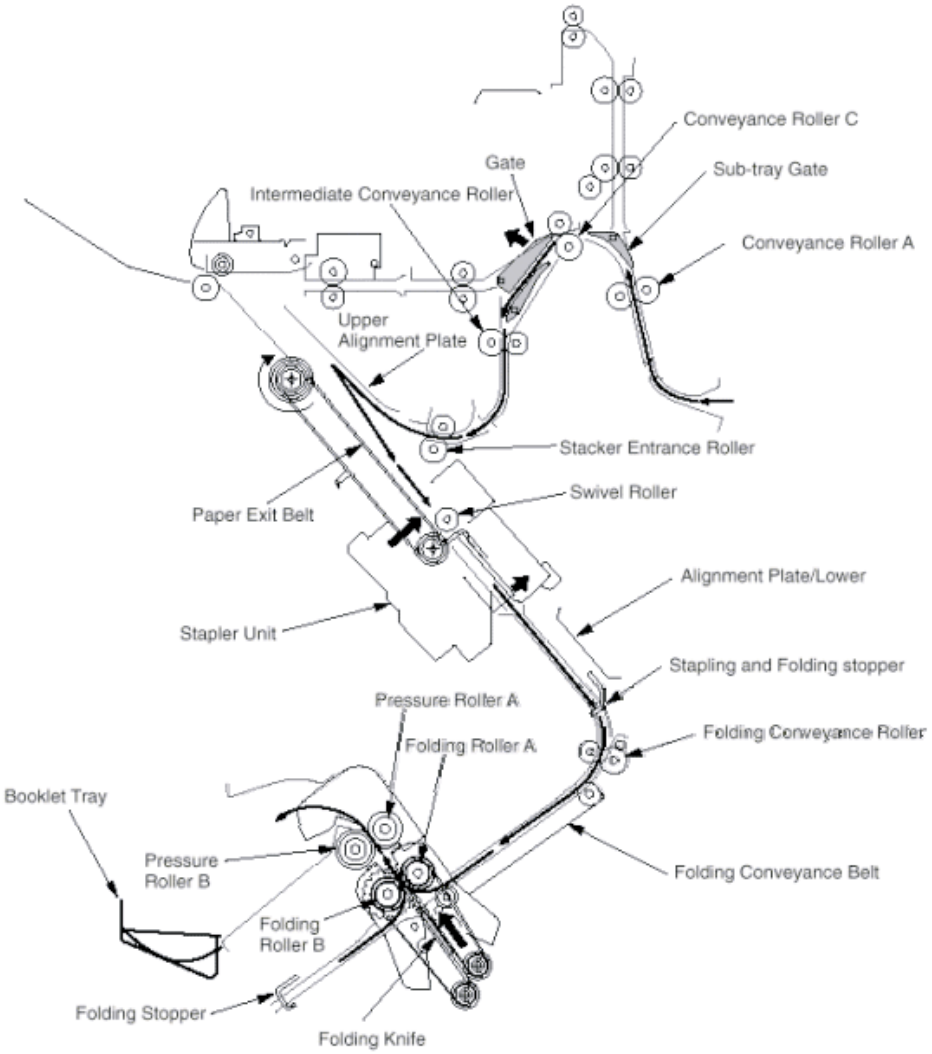


Figure 7-12. View of the Booklet Mode

7.4. Conveyance Section

7.4.1. Construction

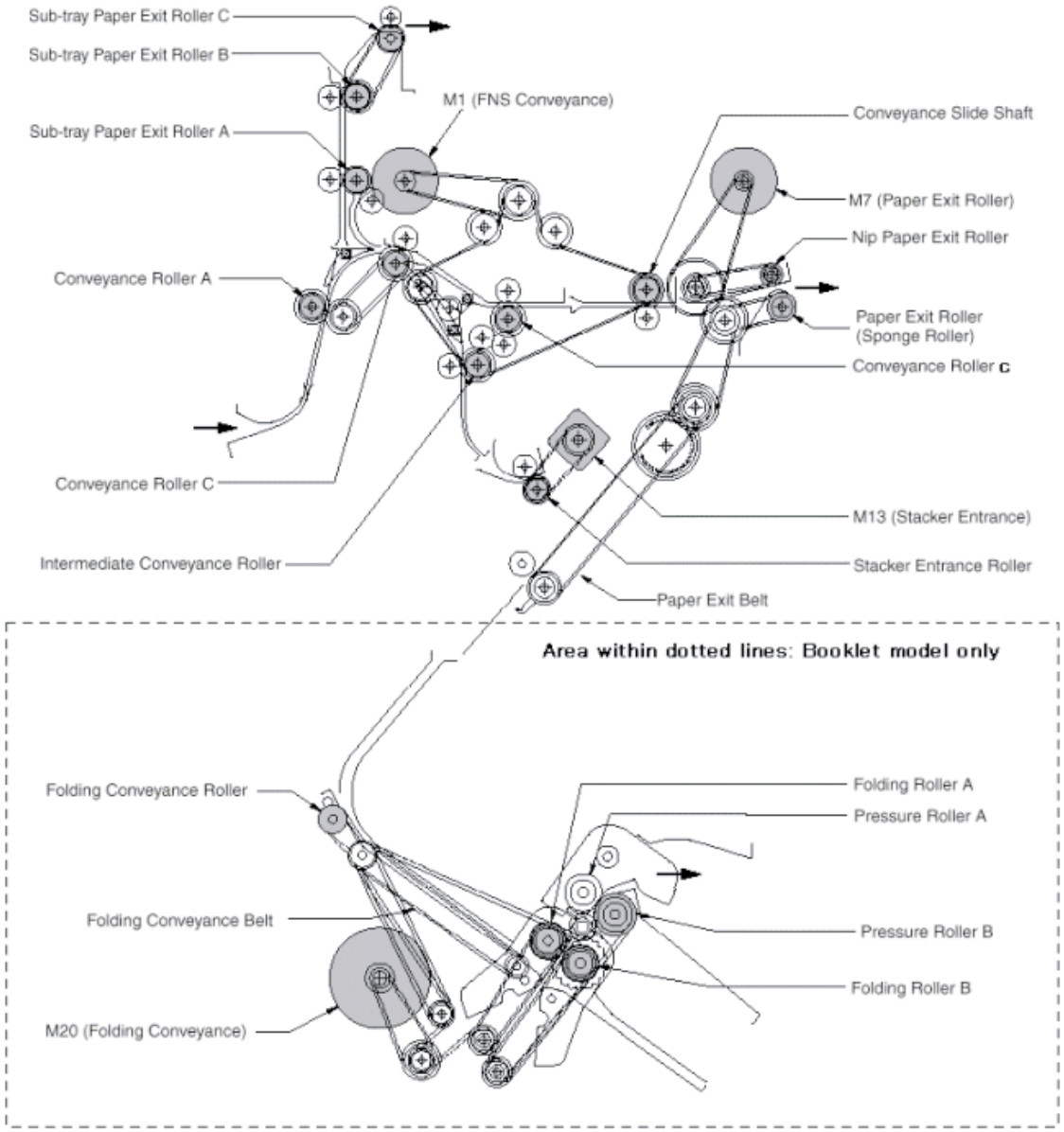


Figure 7-13. Construction of the Conveyance section

7.4.2. Mechanism

7.4.2.1. Paper Conveyance

Paper conveyance is carried out by conveyance rollers A, B, and C; the intermediate conveyance roller; the conveyance slide shaft; and sub-tray paper exit rollers A, B, and C. These components are driven by M1 (FNS conveyance) by means of a timing belt.

Stacking is implemented by the stacker entrance roller and the swivel roller. These rollers are driven by the M13 (stacker entrance) by means of a timing belt.

Ejection to the main tray (following staple processing) is implemented by the stacker paper exit belt arm and the paper exit roller. These components are driven by the M7 (paper exit).

Ejection to the booklet tray is implemented by the folding conveyance roller, the folding conveyance belt, the folding knife, folding rollers A and B, and pressure rollers A and B.
The folding knife is driven by M19 (folding knife). The conveyance belt, folding rollers, and pressure rollers are driven by the M20 (folding conveyance) by means of a timing belt.

7.4.2.2. Paper Path Switching

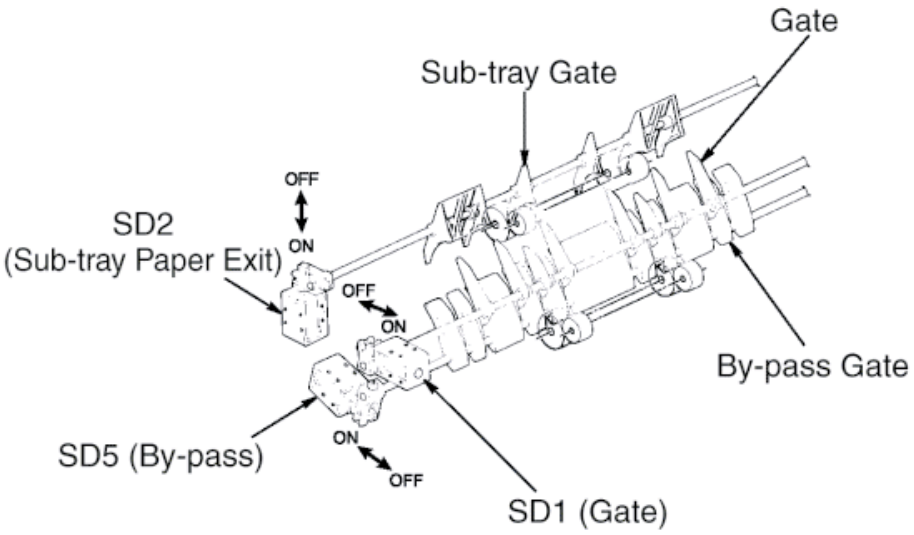


Figure 7-14. View of the Paper path Switching

Path switching is carried out by the gate, the sub-tray gate, and the by-pass gate. Each of these is controlled by the ON/OFF action of a corresponding solenoid: SD1 (gate), SD2 (sub-tray paper exit), and SD5 (by-pass), respectively.

7.4.2.3. Shift Unit Offset Operation

(1.) Paper entering the shift unit is fed toward the paper exit direction by the action of the slide shaft.

(2.) Driving by M2 (roller shift) causes the linkage to shift the slide shaft and paper 30mm toward the rear.

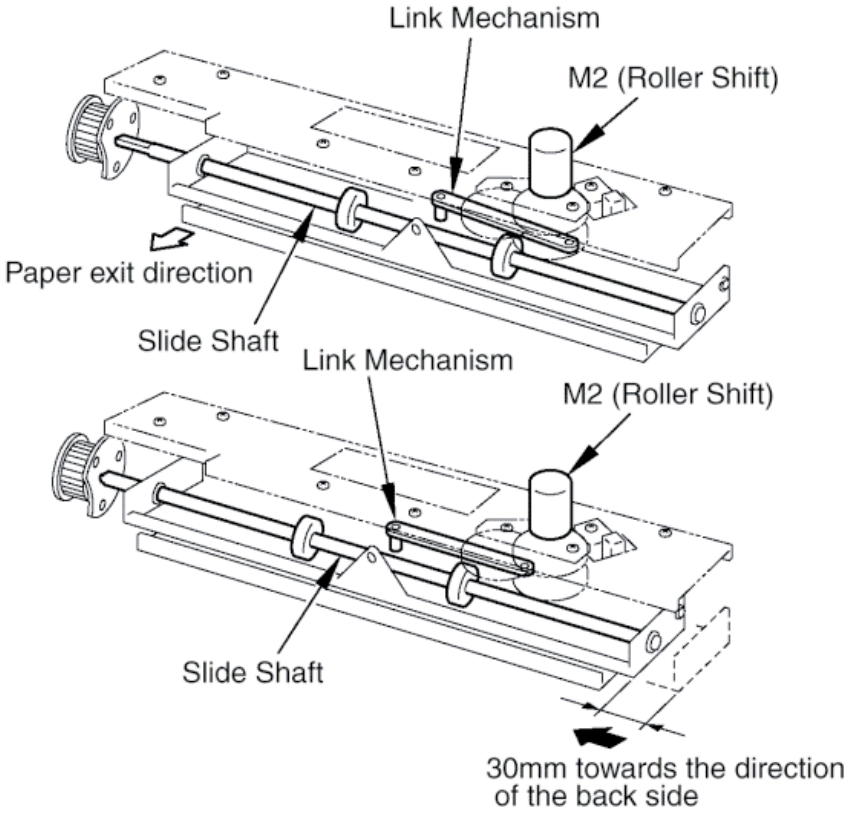


Figure 7-15. View of the Shift Unit Offset Operation

7.4.2.4. Stacker Unit

Paper Alignment (Staple Mode (Flat Stapling))

Sheets conveyed into the stacker are aligned by the oscillation of the (front and rear) alignment plates/upper. The alignment plates/upper are driven by M5 (alignment plate/upper).

Paper Alignment (Booklet model only)

Sheets conveyed into the stacker are aligned by the movement of the (front and rear) alignment plates/upper and the (front and rear) alignment plates/lower. The alignment plates/upper are driven by M5 (alignment plate/upper); the alignment plates/lower are driven by M15 (alignment plate/ lower). The stapling-and-folding stopper is moved by M14 (stapling-and-folding stopper) and is released by M17 (stapling and-folding stopper release).

Paper Exiting

Stapled paper is sent to the paper exit by the paper exit arm. The paper exit belt is driven by M7 (paper exit-roller).

Feeding to the Folding Unit (Booklet model only)

M17 (stapling-and-folding stopper release) releases the stapling-and-folding stopper and feeds the paper into the folding unit.

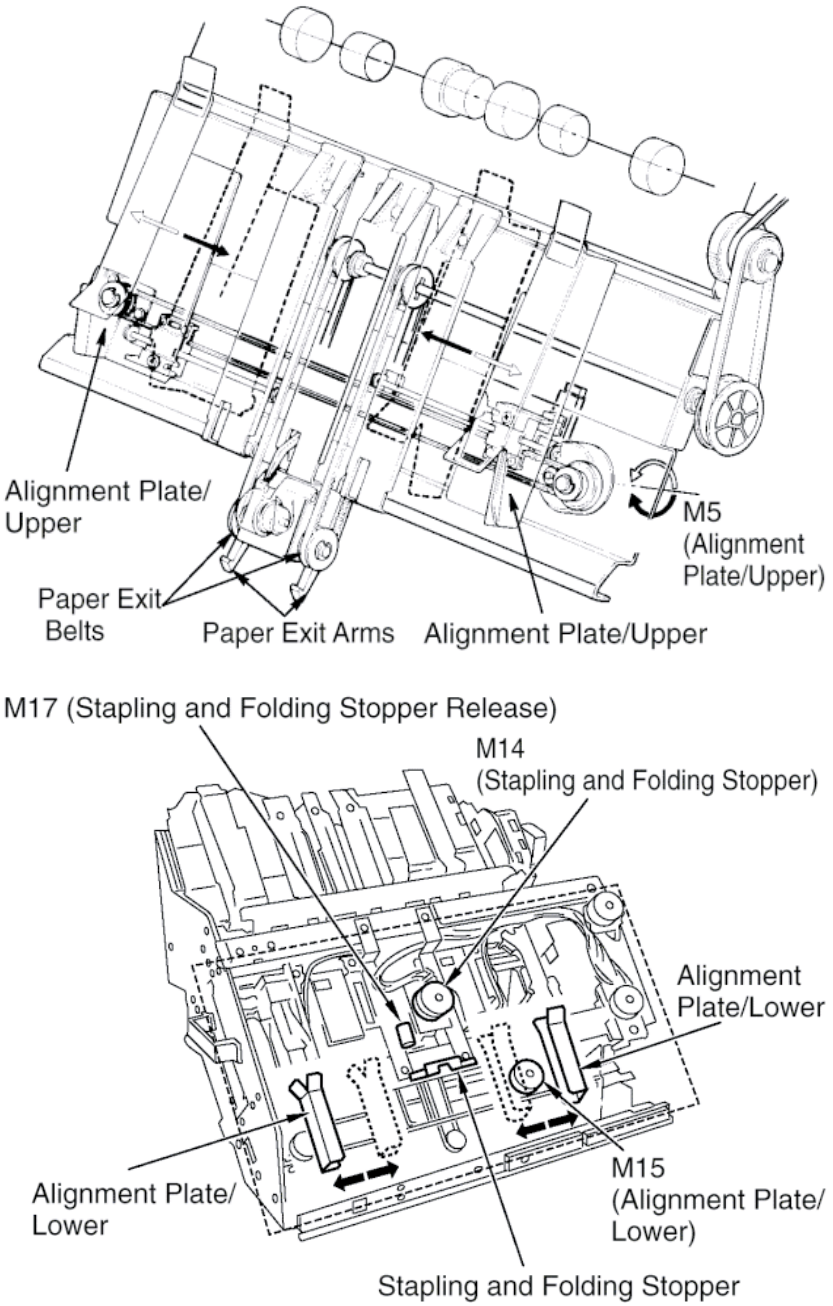


Figure 7-16. View of the Stacker Unit

7.4.2.5. Paper Exit Opening Unit

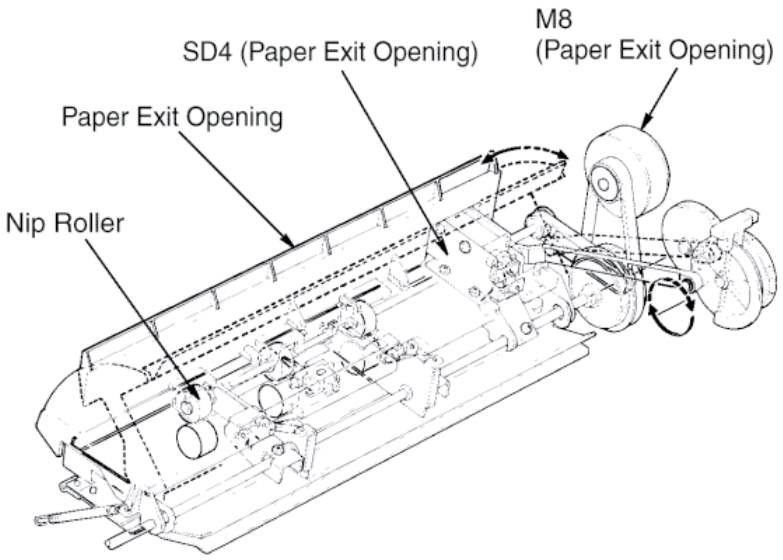


Figure 7-17. View of the Paper Exit Opening Unit

a. Staple Mode and Booklet Mode Operation for Paper Sizes A4R and Above

Because paper of this size juts out from the stacker, the paper exit opening is held open from the start of copying until the completion of stapling.

b. Paper Exit of the Staple Mode (Flat Stapling)

Upon completion of stapling, the paper exit closes, and the paper is grasped and ejected to the main tray. The opening and closing of the paper exit is controlled by M8 (paper exit opening).

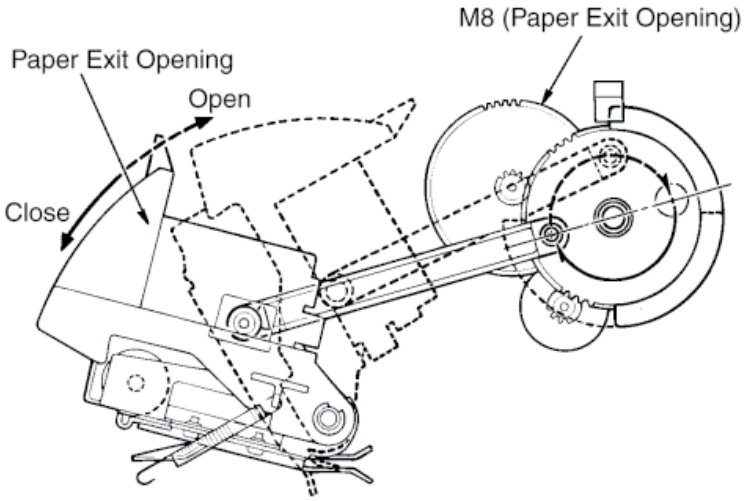


Figure 7-18. View of the Paper Exit Opening Unit

c. Pressure of the Paper Exit Roller

The paper exit roller turns more slowly than the conveyance rollers (A, B, and C), and remains unengaged by the nip roller except during ejection.

When paper reaches the paper exit opening, the paper exit roller is engaged by the nip roller and the paper is ejected to the main tray. Engagement and release is con-trolled by SD4 (paper exit opening).

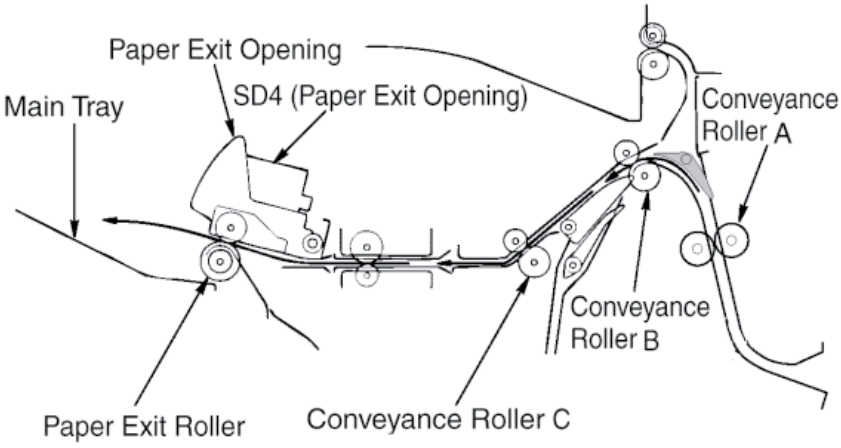


Figure 7-19. View of the Paper Exit Opening Unit

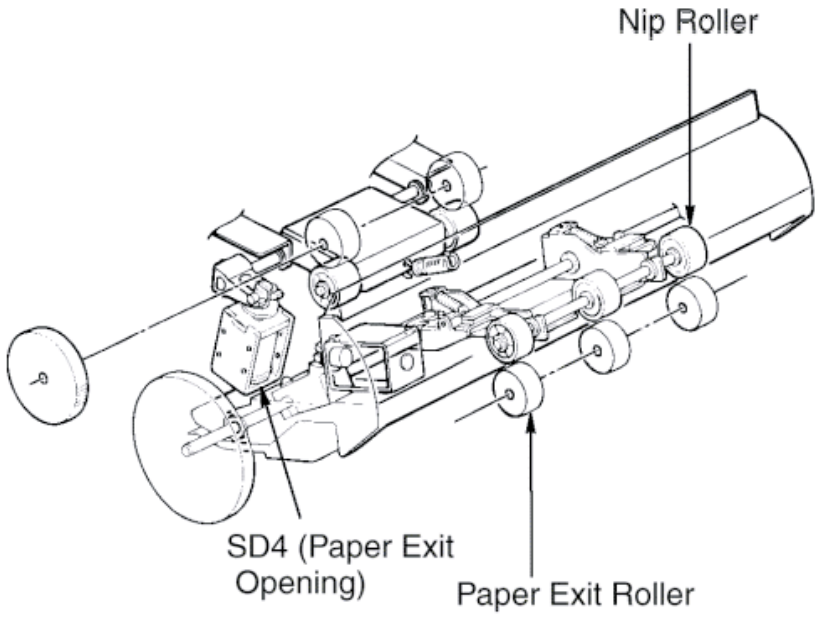


Figure 7-20. View of the Paper Exit Opening Unit

7.4.2.6. Folding by the Folding Unit (Booklet model only)

Paper is conveyed to the folding stopper by the action of the folding conveyance roller and the folding conveyance belts, and is then folded by the action of the folding knife and the folding rollers. The folding conveyance roller, the folding conveyance belts, the folding rollers, and the pressure roller are driven by M20 (folding conveyance). M18 (folding stopper) drives the folding stopper. M19 (folding knife) drives the folding knife.

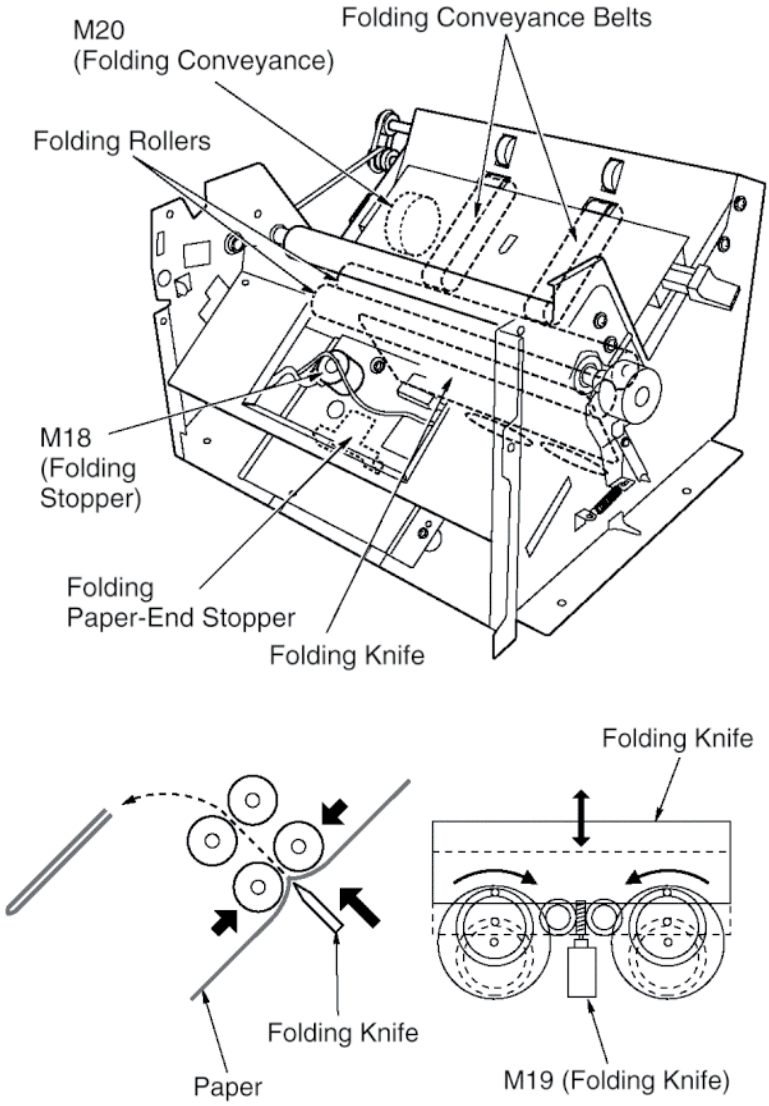


Figure 7-21. View of the Folding Unit

7.5. Stapler Unit

7.5.1. Composition

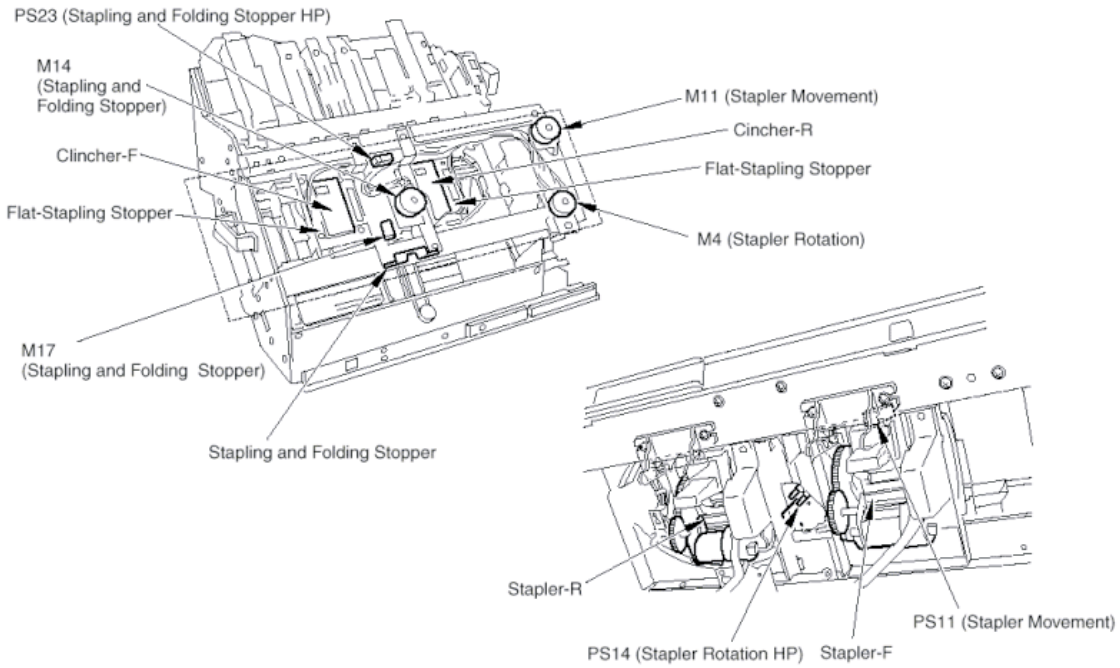


Figure 7-22. Composition of the Stapler Unit

7.5.2. Mechanism

7.5.2.1. Single Staple (Front)

Stapler-F and clincher-F move to the staple position, driven by M11 (stapler movement). After moving into position, they staple the stacked paper.

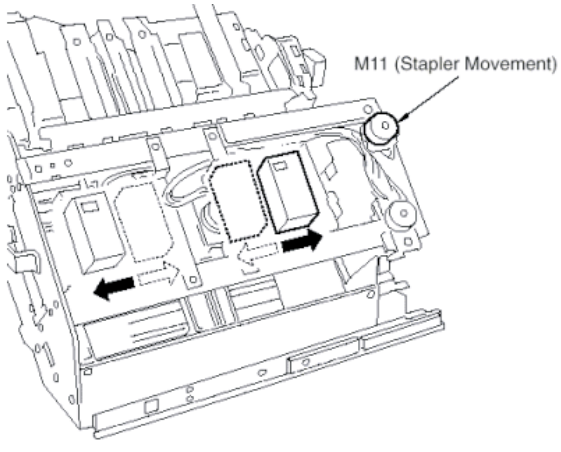


Figure 7-23. View of the Single Staple

7.5.2.2. Single Staple (Rear)

Stapler-R and clincher-R slide into the staple position. M11 (stapler movement) and M4 (stapler rotation) control the motion.

Stapler-R and clincher-R rotate and move to the staple position.

Rotation is driven by M4 (stapler rotation).

Stapler-R and clincher-R staple the stacked paper.

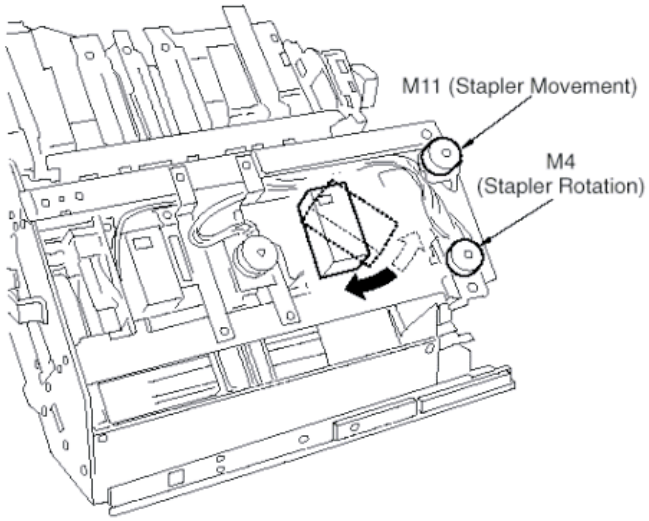


Figure 7-24. View of the Single Staple

7.5.2.3. Two Staples (Flat)

Stapler-F, stapler-R, clincher-F, and clincher-R move into position and staple the stacked paper in two locations.

Stapler-F and clincher-F are driven by M11 (stapler movement).

Stapler-R and clincher-R are driven by M11 and M4 (stapler rotation).

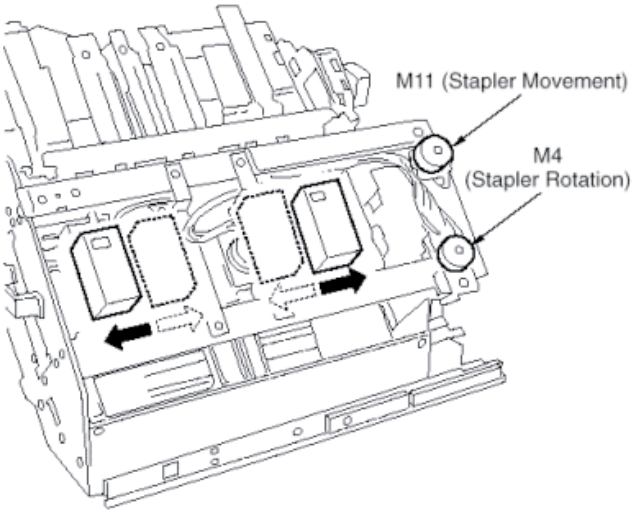


Figure 7-25. View of the Two Staples

7.5.2.4. Two staples (staple & fold) (Booklet model only)

Stapler F, stapler R, clincher F, and clincher R move into position.

Paper is transported to the stapling-and-folding stopper, and then aligned by the action of the upper and lower alignment plates. The paper is then stapled in two locations.

Stapler-F and clincher-F are driven by M11 (stapler movement). Stapler-R and clincher-R are driven by M11 and M4 (stapler rotation).

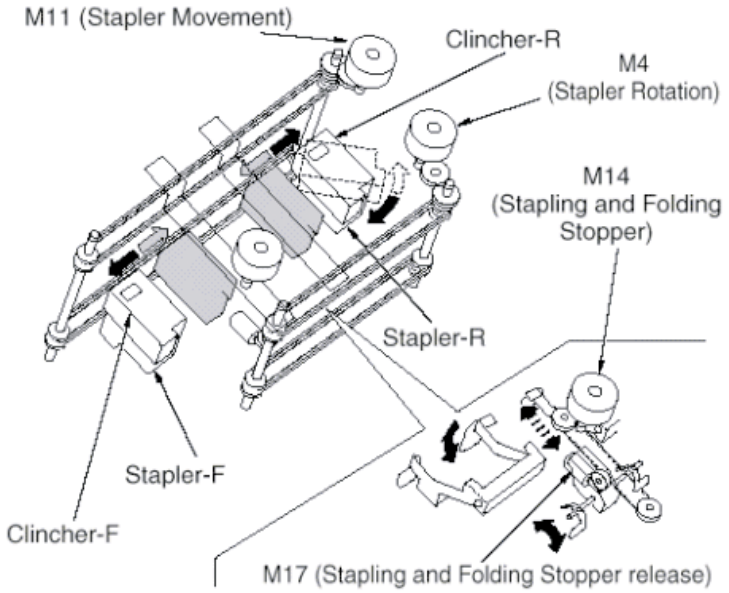


Figure 7-26. View of the Two Staples

7.5.2.5. Operation of the flat-stapling and stapling-and-folding stopper (Booklet model only)

The flat-stapling stopper is held set while the stapling-and-folding stopper unit is at home position. The flat-stapling stopper is released by a spring when the stapling-and-folding stopper unit is moved out of home position by the action of M14 (stapling-and-folding stopper).

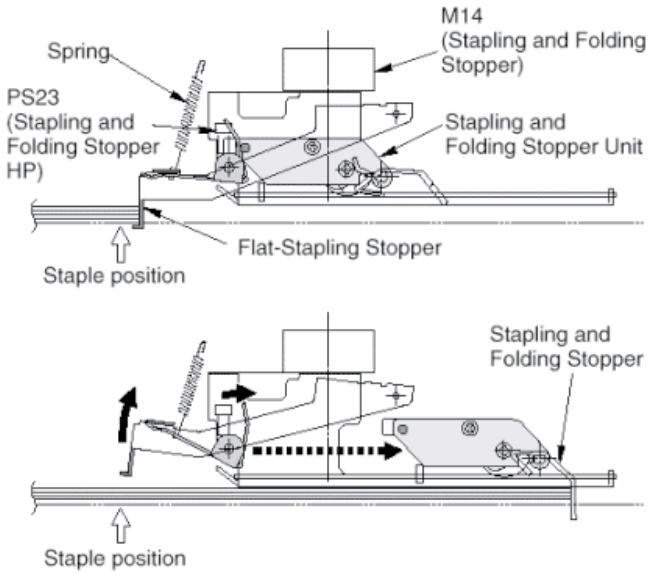


Figure 7-27. Operation of the flat-stapling and stapling-and-folding stopper

When the stapling-and-folding stopper unit has moved into the predetermined position, it is set in place by M17 (stapling-and-folding stopper release).

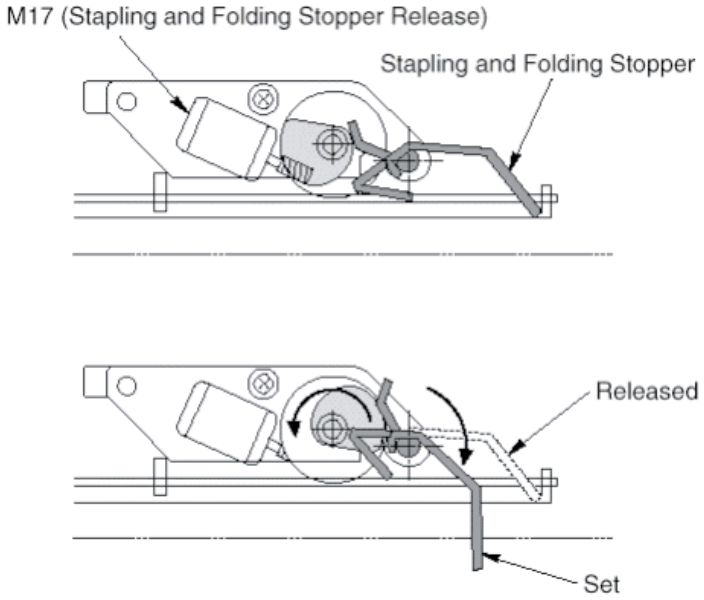


Figure 7-28. Operation of the flat-stapling and stapling-and-folding stopper

For stapling-and-folding operation: Paper is transported up to the stapling-and-folding stopper for stapling. When stapling is completed, M17 releases the stopper and the paper set moves to the folding unit. Setting and releasing of the stopper is repeated for each paper set.

Return of the staple paper-end stopper to home position resets the flat-stapling stopper.

7.5.2.6. Stapling operation

Each stapler houses a stapler motor, and each clincher houses a clincher motor. Motors M24 (stapler/F) and M22 (stapler/R) eject the staples, while motors M23 (clincher/F) and M21 (clincher/R) bend the staples.

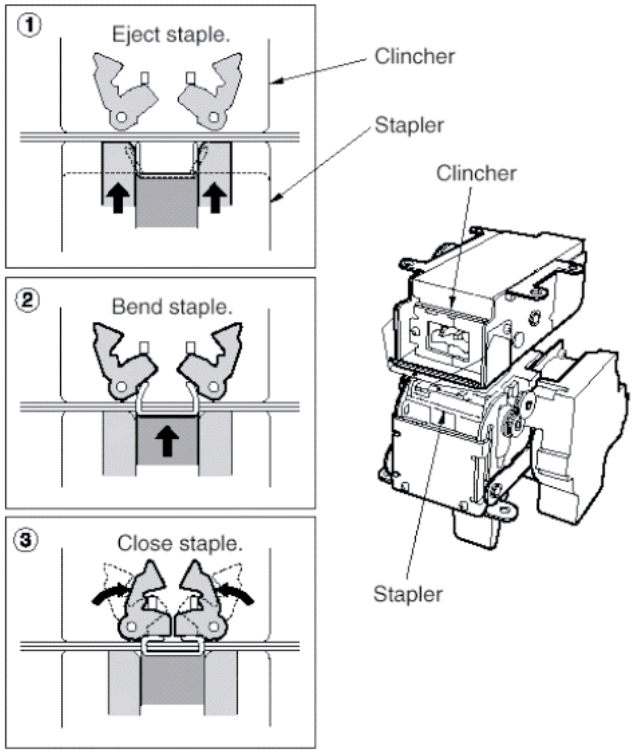


Figure 7-29. View of the stapling operation

The timing for staple clinching is controlled by stapler-internal sensors PS32 (clincher-timing/R) and PS35 (clincher-timing/F). Switching ON of PS32 and PS35 causes motors M21 and M23 (within the clinchers) to operate, initiating the clinch action.

Motor M11 (stapler movement) controls the movement (displacement) of both staplers and both clinchers, while motor M4 (stapler rotation) controls the rotation of stapler-R and clincher-R. PS11 (stapler movement HP) detects stapler movement (displacement), and PS14 (stapler rotation HP) detects stapler rotation.

SW1 (cartridge-R detection) and SW3 (cartridge-F detection) detect presence (and correct setting) or absence (or improper setting) of the respective staple cartridges. SW2 (staple detection/R) and SW4 (staple detection/F) come ON when the amount of staples in the respective cartridge runs low.

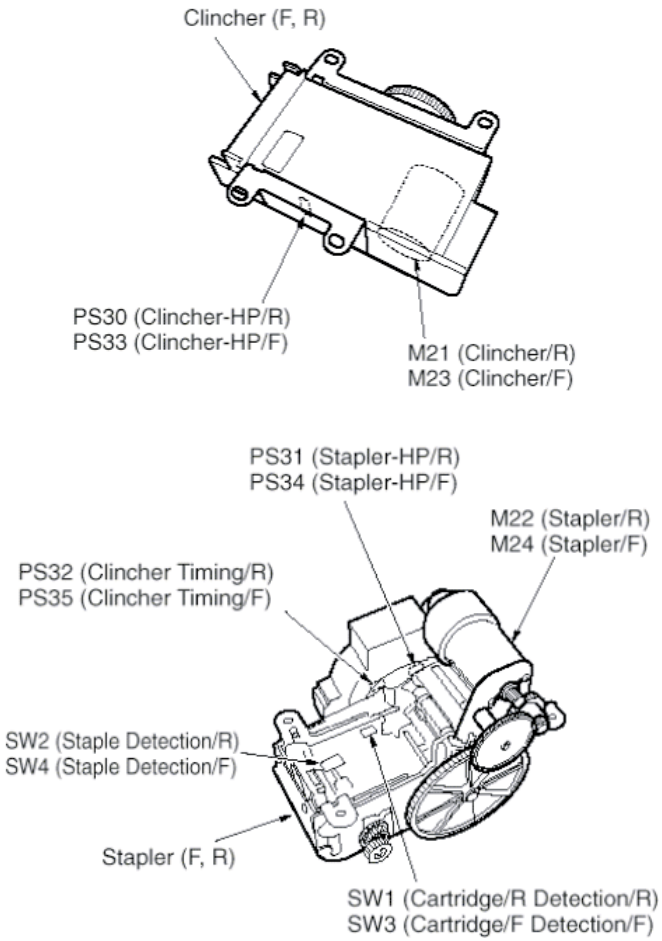


Figure 7-30. View of the stapling operation

7.6. Folding Unit (Booklet model only)

7.6.1. Composition

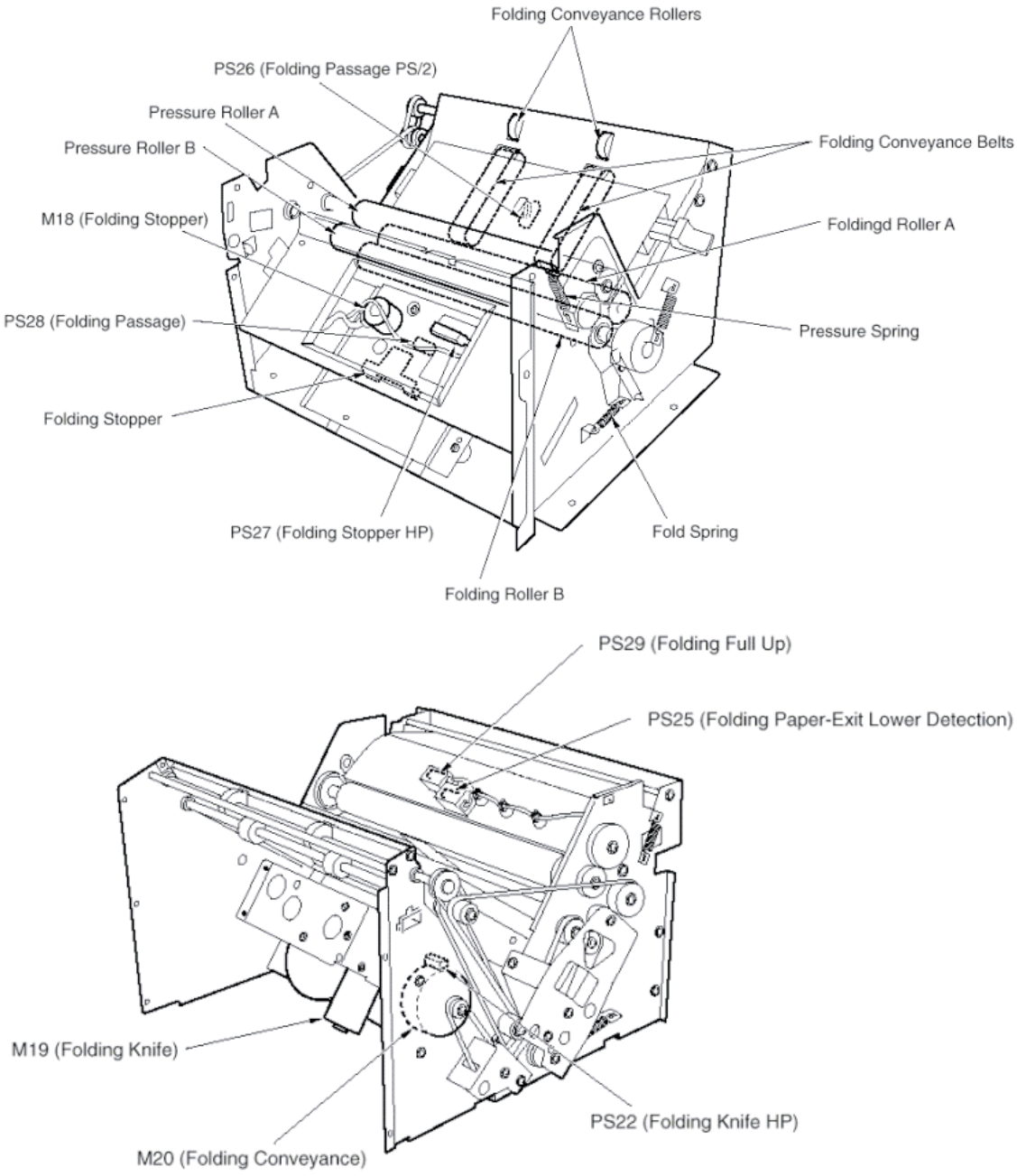


Figure 7-31. Composition the Folding Unit

7.6.2. Mechanism

M18 (folding stopper) moves the folding stopper into the predetermined position. M20 (folding conveyance) drives the folding conveyance rollers and conveyance belt so as to transport the paper up to this stopper.

M19 (folding knife) drives the folding knife. Paper is folded over by the action of the knife and folding rollers, and the fold is pressurized by the action of the folding rollers and the pressure rollers. M20 drives the folding rollers and pressure rollers so as to eject the folded paper set into the booklet tray.

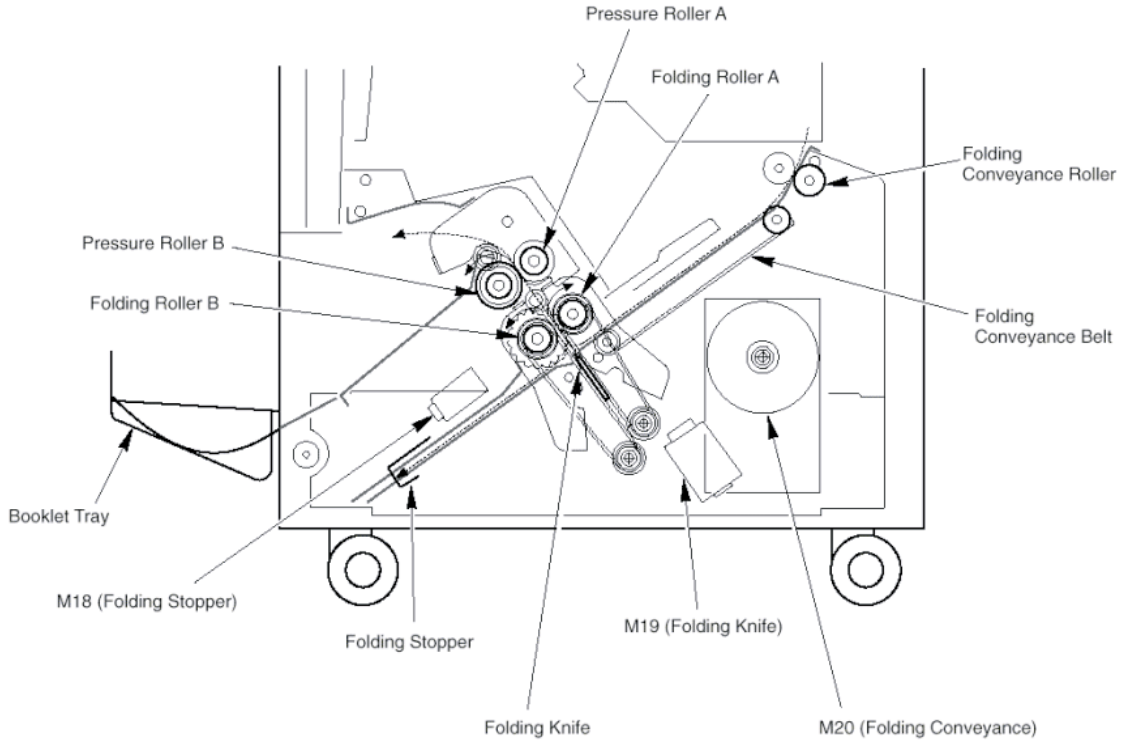


Figure 7-32. Mechanism of the Folding Unit

SUPPLEMENT 1 - Adjustment value and data of Stapling / Folding position

Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)	Adjustment value(mm)	Adjustment Data(HEX)
12.8	00	9.6	20	6.4	40	3.2	60	0	80	-3.2	A0	-6.4	C0	-9.6	E0
12.7	01	9.5	21	6.3	41	3.1	61	-0.1	81	-3.3	A1	-6.5	C1	-9.7	E1
12.6	02	9.4	22	6.2	42	3.0	62	-0.2	82	-3.4	A2	-6.6	C2	-9.8	E2
12.5	03	9.3	23	6.1	43	2.9	63	-0.3	83	-3.5	A3	-6.7	C3	-9.9	E3
12.4	04	9.2	24	6.0	44	2.8	64	-0.4	84	-3.6	A4	-6.8	C4	-10.0	E4
12.3	05	9.1	25	5.9	45	2.7	65	-0.5	85	-3.7	A5	-6.9	C5	-10.1	E5
12.2	06	9.0	26	5.8	46	2.6	66	-0.6	86	-3.8	A6	-7.0	C6	-10.2	E6
12.1	07	8.9	27	5.7	47	2.5	67	-0.7	87	-3.9	A7	-7.1	C7	-10.3	E7
12.0	08	8.8	28	5.6	48	2.4	68	-0.8	88	-4.0	A8	-7.2	C8	-10.4	E8
11.9	09	8.7	29	5.5	49	2.3	69	-0.9	89	-4.1	A9	-7.3	C9	-10.5	E9
11.8	0A	8.6	2A	5.4	4A	2.2	6A	-1.0	8A	-4.2	AA	-7.4	CA	-10.6	EA
11.7	0B	8.5	2B	5.3	4B	2.1	6B	-1.1	8B	-4.3	AB	-7.5	CB	-10.7	EB
11.6	0C	8.4	2C	5.2	4C	2.0	6C	-1.2	8C	-4.4	AC	-7.6	CC	-10.8	EC
11.5	0D	8.3	2D	5.1	4D	1.9	6D	-1.3	8D	-4.5	AD	-7.7	CD	-10.9	ED
11.4	0E	8.2	2E	5.0	4E	1.8	6E	-1.4	8E	-4.6	AE	-7.8	CE	-11.0	EE
11.3	0F	8.1	2F	4.9	4F	1.7	6F	-1.5	8F	-4.7	AF	-7.9	CF	-11.1	EF
11.2	10	8.0	30	4.8	50	1.6	70	-1.6	90	-4.8	B0	-8.0	D0	-11.2	F0
11.1	11	7.9	31	4.7	51	1.5	71	-1.7	91	-4.9	B1	-8.1	D1	-11.3	F1
11.0	12	7.8	32	4.6	52	1.4	72	-1.8	92	-5.0	B2	-8.2	D2	-11.4	F2
10.9	13	7.7	33	4.5	53	1.3	73	-1.9	93	-5.1	B3	-8.3	D3	-11.5	F3
10.8	14	7.6	34	4.4	54	1.2	74	-2.0	94	-5.2	B4	-8.4	D4	-11.6	F4
10.7	15	7.5	35	4.3	55	1.1	75	-2.1	95	-5.3	B5	-8.5	D5	-11.7	F5
10.6	16	7.4	36	4.2	56	1.0	76	-2.2	96	-5.4	B6	-8.6	D6	-11.8	F6
10.5	17	7.3	37	4.1	57	0.9	77	-2.3	97	-5.5	B7	-8.7	D7	-11.9	F7
10.4	18	7.2	38	4.0	58	0.8	78	-2.4	98	-5.6	B8	-8.8	D8	-12.0	F8
10.3	19	7.1	39	3.9	59	0.7	79	-2.5	99	-5.7	B9	-8.9	D9	-12.1	F9
10.2	1A	7.0	3A	3.8	5A	0.6	7A	-2.6	9A	-5.8	BA	-9.0	DA	-12.2	FA
10.1	1B	6.9	3B	3.7	5B	0.5	7B	-2.7	9B	-5.9	BB	-9.1	DB	-12.3	FB
10.0	1C	6.8	3C	3.6	5C	0.4	7C	-2.8	9C	-6.0	BC	-9.2	DC	-12.4	FC
9.9	1D	6.7	3D	3.5	5D	0.3	7D	-2.9	9D	-6.1	BD	-9.3	DD	-12.5	FD
9.8	1E	6.6	3E	3.4	5E	0.2	7E	-3.0	9E	-6.2	BE	-9.4	DE	-12.6	FE
9.7	1F	6.5	3F	3.3	5F	0.1	7F	-3.1	9F	-6.3	BF	-9.5	DF	-12.7	FF

When the "Adjustment data" is getting smaller, "Stapling-and-Folding Stopper" and "Folding Stopper" are adjusted upward.
Then "Stapling position" or "Folding position" is adjusted toward the right direction.